

GRAIN & FEED JOURNALS CONSOLIDATED

A Merger of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter



Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$10 per year.

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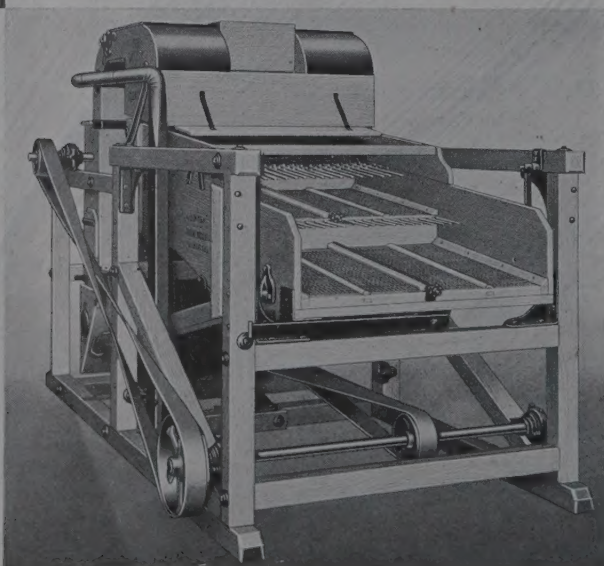
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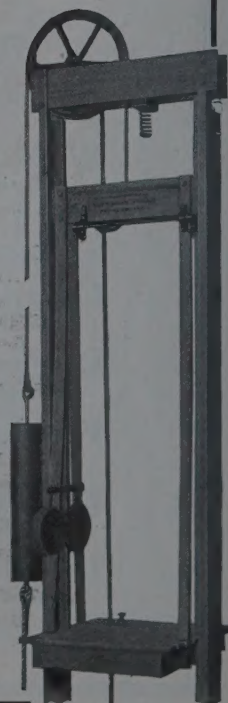
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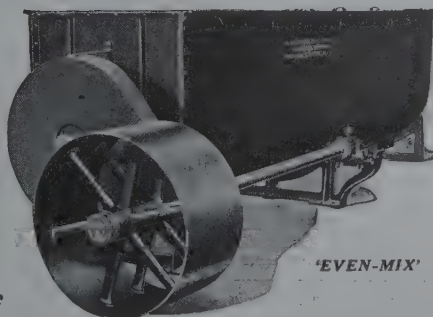
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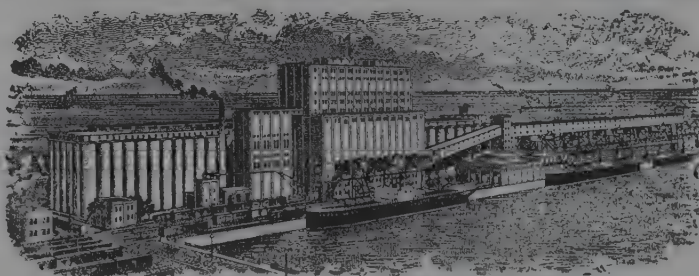
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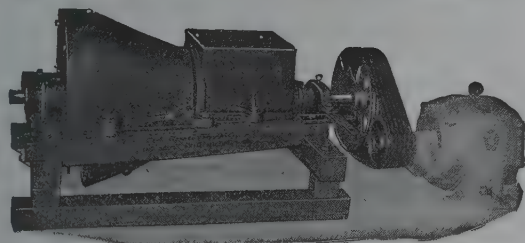
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Regardless of how large or how small your plant may be, you'll find a dependable Sidney corn sheller made to fit your requirements in the complete line of grain machinery. Sidney corn shellers have all these advantages . . . roller bearings, heavy frame, chilled cast iron teeth, heavy shaft, balanced throughout. Adjustable for all kinds of corn. Write today for details, and ask for your copy of our new catalog—no obligation.

THE *Sidney* GRAIN MACHINERY CO.
"Manufacturers for over 75 years" • Sidney, Ohio

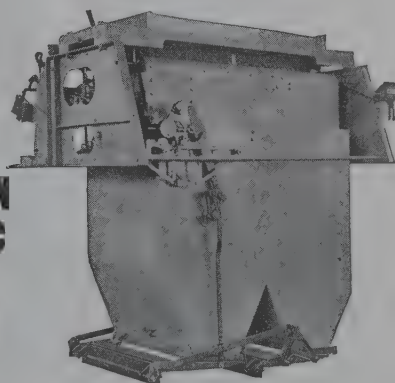


"THAT'S THE TICKET!"

*It safeguards my
grain profits!"*

Users of the Richardson Automatic Grain Shipping Scale know they're paid for ALL the grain they ship. A clearly-printed record—on a ticket you can keep for permanent reference—protects you against over-weights on the one hand and against complaint - causing underweights on the other.

THE RICHARDSON AUTOMATIC GRAIN SHIPPING SCALE



—weighs grain with machine precision and records the exact results on printed forms that are easy to read. Richardson Automatic Grain Scales are built in sizes to suit your needs—from 1,000 bushels per hour up to 20,000 bushels per hour.

Learn how this Richardson Shipping Scale can safeguard your grain-shipping profits by eliminating human errors. Catalog G1219 tells you all about it. A copy is yours for the asking.

Ⓢ 3127

RICHARDSON

Atlanta Boston Chicago Minneapolis Montreal New York
Omaha Philadelphia San Francisco Pittsburgh Toronto Wichita
RICHARDSON SCALE COMPANY, CLIFTON, N. J.

Wanted and For Sale

The rate for advertisements in this department is 25 cents per type line each insertion

ELEVATORS FOR SALE

TWO ELEVATORS for sale; to be dismantled. Busenbark Grain Co., Crawfordsville, Ind.

NORTHWESTERN OHIO Elevator, feed and seed business for sale; Diesel powered; will do \$100,000.00 per year or better. In a splendid community; good reasons for selling. Address 89Y7, Grain & Feed Journals, Chicago, Ill.

EASTERN INDIANA Elevator for sale. Small town on two R.R.; motor power; grinding, equipment; good business; employ three; small investment; terms to suit. Manager in Army. Address 89Y1, Grain & Feed Journals, Chicago, Ill.

COUNTY SEAT elevator for sale, with two acres land. Coal and feed business. Big basement. Other storage buildings. Ample space for business expansion. Reasonable. Mrs. Lillian Gross Hallermann, Carlyle, Ill.

CENTRAL INDIANA—Will sell one half interest in grain elevator to party capable of taking over management. Located in good grain and feed territory. Doing good business. Terms can be arranged. Reason for selling, other business. Address 89Y4, Grain & Feed Journals, Chicago, Ill.

HELP WANTED

WANTED—Track grain buyer. Advise experience, idea of salary, and if at present employed. Write 89Z4, Grain & Feed Journals, Chicago.

WANTED—Competent man as cash grain solicitor and manager of branch office in Illinois. Address 89Z5, Grain & Feed Journals, Chicago.

ELEVATOR MANAGER who understands buying grain, seeds, selling coal and manufactured feeds. To start work first of year. Can use a millwright capable of being foreman. Harvey Doll, Pres., Bushnell Co-op. Co., Bushnell, Ill.

WANTED: Experienced elevator manager for full time job; good pay with house, lights, and garden space furnished; also will allow sale of feed as side line on commission basis. Station—good grain center located on hard road, eight miles from town of about 60,000 population. Satisfactory references required. Address 89Z14, Grain & Feed Journals, Chicago.

SITUATION WANTED

EXPERIENCED grain and lumberman wants managership—good elevator or both; knows sidelines, accounting; married. Address 89Z6, Grain & Feed Journals, Chicago, Ill.

MILL FOR SALE

FOR SALE CHEAP—40 bbl. long system flour mill, water power. In thriving town in South Central Michigan; population 1300. Two factories; good markets. Must be sold account of failing health. Good proposition for right man. Otto Lass, Nashville, Mich.

SAMPLE ENVELOPES

SAMPLE ENVELOPES—SPEAR SAFETY—for mailing samples of grain, feed and seed. Made of heavy kraft paper, strong and durable; size 4½x7 inches, \$2.75 per hundred, or 500, \$12.00 plus postage. Seed size 3½x5¼ ins., per hundred \$2.00 plus postage. Grain & Feed Journals, 327 S. La Salle St., Chicago, Ill.

Daily

MARKET RECORD

A boon to the grain dealer who keeps convenient, permanent record of daily market prices for ready reference.

This book provides spaces for recording hourly quotations on Wheat, Corn, Oats, Rye, Soybeans, and Barley. Spaces for a week's markets on a sheet; sixty sheets in a book. Order Form CND 97-6—Price \$1.10, plus postage. Shipping Weight, 1 pound.

Grain & Feed Journals

Consolidated

327 S. La Salle St., Chicago, Ill.

MOTORS—GENERATORS

ELECTRICAL MACHINERY

Large stock of motors and generators, A.C. and D.C., new and rebuilt, at attractive prices. Special bargains in hammermill motors, 25 to 100 H.P., 1200 to 3600 R.P.M. Write for stock list and prices. Expert repair service. V. M. NUSSBAUM & CO., Fort Wayne, Indiana.

MOTOR-PUMPS: Guaranteed rebuilt electric motors, pumps, etc. Largest stock in Illinois, outside of Chicago. Will take your equipment in trade; also offer emergency motor repair and rewinding service. Distributors for Wagner and Peerless motors, specially adapted for farm and grain elevator application. We offer free engineering advice on your problems. Write us without obligation. New illustrated bulletin No. 23, just off the press, will be mailed on request. Rockford Power Machinery Co., 6th Ave. and 6th St., Rockford, Ill.

MACHINES WANTED

WANTED TO BUY—Small used moisture tester. Hansen Grain Co., Exira, Ia.

PORTABLE SMALL GRAIN Loader wanted; state make, size, condition, price. Nelson Grain Company, Claude, Texas.

BOERNER SAMPLER or mixer wanted. State condition and price. Graham Grain Co., 221 S. Fourth St., Terre Haute, Ind.

A USED OR NEW feed mill about 26 inch. Attrition or Hammer. Farmers Un. Elev. Assn., Thorpe, Minn., P. O. Lake Lillian, Minn.

Railroad Claim Books

(Duplicating) require little of your time for filing, and contain spaces for all the necessary information in the order which assure prompt attention by the claim agent. They increase and hasten your returns by helping you to prove your claims.

- A is for Loss of Weight in Transit Claims.
- B—Loss in Market Value Due to Delay in Transit.
- C—Loss in Quality Due to Delay in Transit.
- D—Loss in Market Value Due to Delay in Furnishing Cars.
- E—Overcharge in Freight or Weight.

These claim blanks are printed on bond paper, well bound in book form, each book containing 100 originals and 100 duplicates, a two-page index, instructions and summary showing claims unpaid, and four sheets of carbon.

The five forms are assembled in three separate books, each of 200 leaves, weight 3 lbs. Price of each book \$2.25, plus postage.

- 411-A contains 100 sets all Form A.
- 411-E contains 100 sets all Form E.
- 411-5 contains 60 sets Form A, 10 Form B, 10 Form C, 10 Form D and 10 Form E.

Grain & Feed Journals

Consolidated

327 South La Salle St. Chicago, Ill.

A Trial Order

GRAIN & FEED JOURNALS
CONSOLIDATED
327 So. La Salle St., Chicago, Ill.

A MERGER OF
GRAIN DEALERS JOURNAL
AMERICAN ELEVATOR & GRAIN TRADE
THE GRAIN WORLD
PRICE CURRENT—GRAIN REPORTER

Gentlemen:—I wish to try the semi-monthly *Grain & Feed Journals Consolidated* to learn if I can get any helpful suggestions from the opinions, practices and experiences of other grain dealers. Enclosed please find Two Dollars for one year.

Name of Firm.....

Capacity of Elevator

Post Office.....

..... bus.

State.....

MACHINES FOR SALE

CORN CUTTER & Grader—has motor—used very little. 89Q9, Grain & Feed Jnl's., Chicago.

FOR SALE—One Sutton, Steele & Steele, Buckhorn, model H.V. separator. E. H. Morris, Crossville, Ill.

FEED MIXER—one-ton—floor level feed—has motor good as new. Write 89Q10, Grain & Feed Journals, Chicago, Ill.

HAMMER MILL with 25-h.p. motor and all attachments. Priced to sell. Write 89Q11, Grain & Feed Journals, Chicago, Ill.

JAY BEE HAMMERMILL No. 3 for sale. Used only four months. \$350.00. Owner drafted. Nelson Grain Co., Clinton, Okla.

FEED MIXER for sale, has motor, and a late machine. Need space. Will sacrifice. Write 89Q12, Grain & Feed Journals, Chicago, Ill.

FOR SALE—One 500 bushel per hour Standard Ellis Dryer. Wichita Terminal Elevator Co., Wichita, Kan.

JAY BEE PORTABLE feed grinder for sale with Hollander molasses mixer, complete; like new. Joe Denney, Le Roy, Ill.

FOR SALE—Wilson Grain Dryer, complete with boiler, etc. 75 bu. corn capacity per hour. Very little used; recent model; reasonably priced. Knappen Farm Service Company, Schoolcraft, Mich.

FOR SALE—20 hp. Allis motor and starter, 3/60/220/900. \$325.00. No. 24 Western Fan shell-er, roller bearings, \$60.00. 40 hp. Waukesha engine, \$275.00. All A1 shape. Address 89Z8, Grain & Feed Journals, Chicago, Ill.

FOR SALE—50 hp. Westinghouse motor and hammermill with Rockwood drive. Sydney 2000 lb. mixer, Marvel molasses mixer, motor switches, cleaners and new transmission rope. Busenbark Grain Co., Crawfordsville, Ind.

FOR SALE

One Blue Streak 50 HP G. E. Motor; one Hocking Valley Knockout all steel unit; one Miracle Ace complete with 60 HP motor; one Robinson attrition mill 30" double head, two 30 HP motors. D. E. Hughes Co., Hopkins, Mich.

FOR SALE—30 bu. Randolph Dryer; ton suspension type vertical mixer; 40 hp. motor 3600 rpm. suitable for hammermill; No. 4½ Western Sheller and Cleaner; Triumph Sheller; corn cracker outfit; 25 and 50 bbl. Midget Mills; complete contents of three feed mills. Write H. N. Vredenburg, Muncy Mill Machinery, Muncy, Pa.

SCALES FOR SALE

USED GUARANTEED motor truck and warehouse scales; no priority needed. Vibrating screens. Bonded Scale Co., 2176 S. Third St., Columbus, Ohio.

Grain Storage Receipts

A written receipt is indispensable to grain dealers who store grain for farmers. This receipt records the amount, kind, and grade of grain, and sets forth terms of storage as follows:

"Stored grain will be purchased at per bushel under the Chicago future, settlement to be made on or before 19...., at which date the grain described herein will be considered sold.

"Storage must be paid for at the rate of for the first days, and at the rate ofc per bushel per (month, day) thereafter until sold, this charge to include fire insurance. Deterioration and shrinkage at owner's risk."

Grain Storage Receipt book contains 75 originals of goldenrod bond paper, 75 duplicates of manila, 3 sheets of carbon, and heavy, pearl-grey pressboard covers. Shipping weight, 1 lb. Order Form 168R. Price 96c each, or 3 books for \$2.50, plus postage.

Grain & Feed Journals

327 South La Salle St., Chicago, Ill.
Consolidated

Gasoline Sought for Grain Solicitors and Line House Superintendents

The Grain Feed Dealers National Ass'n and its associates have entered pleas with the Office of Price Administration to give to superintendents of lines of country elevators, and solicitors for grain receiving houses who act in a similar capacity, more gasoline.

The petition points out that the average supervisor visits 20 elevators twice each month, and that the 4-gallons per week allowed by the basic gasoline ration A book is not nearly enough to allow him to perform his duties, particularly over the wide distances of the west and central west.

Additional gasoline allowances are anticipated, but the Washington office of the Grain & Feed Dealers National Ass'n points out that grain trade travelers "should not expect gaso-

line for the mileage they formerly traveled per month or year."

"Essential salesmen are given special gasoline rations by O.P.A. Beginning Jan. 1, they may obtain gasoline for 65 per cent of the mileage they covered in 1941, or 8,600 miles, whichever is smaller. We have filed a brief asking for necessary gasoline allowances for country grain elevator superintendents (either for line houses or commission firms), and we are cooperating with other groups in filing supplemental statements."

O.P.A. states salesmen who will become eligible for more than 470 occupational miles a month, are those engaged full time in the sales "of necessary productive equipment for farms, factories, mines, oil wells, lumber camps, and similar productive or extractive establishments, or of essential food, shelter, fuel, clothing and medical supplies. Driving in connection with the sale of non-essential commodities will not be increased."

The Last Word in Clark's Direct Reduction Grain Tables

is a combination of our popular 7-card set, Form 3275 Spiral and our new Truck Loads to Bushels, Form 23,090 Spiral which reduce by 10 pound breaks any weight of grain from 600 to 23,090 pounds to bushels of 32, 48, 56, 60, 70 and 75 lbs.

Carefully printed from large clear type, using jet black ink, showing the bushels directly beside the weight of grain reduced and distinctly separated by rules and spaces so as to prevent errors in reading. The most practical, the most helpful grain reduction tables ever published. Their use will return their cost every day of the busy season in labor and time saved and errors prevented.

The spiral binding keeps the cards flat, and in regular sequence, and prevents the exposure of more than one grain at a time so it is easy to keep wide open the tables for the grain being received.

Both sets of tables are printed on heavy six ply tough check of durable quality, 11x13 inches with marginal index. Shipping weight, 3 lbs. You can get both sets described below for \$2.85, plus postage.

Direct Reduction Grain Tables

COPYRIGHT BY GRAIN & FEED JOURNALS, CHICAGO

32 lbs. per bushel OATS

Wt. per bushel	Wt. per bushel	Wt. per bushel	Wt. per bushel	Wt. per bushel	Wt. per bushel	Wt. per bushel	Wt. per bushel	Wt. per bushel	Wt. per bushel
600	18.75	610	19.06	620	19.38	630	19.69	640	20.00
650	20.31	660	20.62	670	20.94	680	21.25	690	21.56
700	21.88	710	22.19	720	22.50	730	22.81	740	23.12
750	23.44	760	23.75	770	24.06	780	24.38	790	24.69
800	25.00	810	25.31	820	25.62	830	25.94	840	26.25
850	26.56	860	26.88	870	27.19	880	27.50	890	27.81
900	28.12	910	28.44	920	28.75	930	29.06	940	29.38
950	29.69	960	30.00	970	30.31	980	30.62	990	30.94
1000	31.25	1010	31.56	1020	31.88	1030	32.19	1040	32.50
1050	32.81	1060	33.12	1070	33.44	1080	33.75	1090	34.06
1100	34.38	1110	34.69	1120	35.00	1130	35.31	1140	35.62
1150	35.94	1160	36.25	1170	36.56	1180	36.88	1190	37.19
1200	37.50	1210	37.81	1220	38.12	1230	38.44	1240	38.75
1250	39.06	1260	39.38	1270	39.69	1280	40.00	1290	40.31
1300	40.62	1310	40.94	1320	41.25	1330	41.56	1340	41.88
1350	42.19	1360	42.50	1370	42.81	1380	43.12	1390	43.44
1400	43.75	1410	44.06	1420	44.38	1430	44.69	1440	45.00
1450	45.31	1460	45.62	1470	45.94	1480	46.25	1490	46.56
1500	46.88	1510	47.19	1520	47.50	1530	47.81	1540	48.12
1550	48.44	1560	48.75	1570	49.06	1580	49.38	1590	49.69
1600	50.00	1610	50.31	1620	50.62	1630	50.94	1640	51.25
1650	51.56	1660	51.88	1670	52.19	1680	52.50	1690	52.81
1700	53.12	1710	53.44	1720	53.75	1730	54.06	1740	54.38
1750	54.69	1760	55.00	1770	55.31	1780	55.62	1790	55.94
1800	56.25	1810	56.56	1820	56.88	1830	57.19	1840	57.50
1850	57.81	1860	58.12	1870	58.44	1880	58.75	1890	59.06
1900	59.38	1910	59.69	1920	60.00	1930	60.31	1940	60.62
1950	60.94	1960	61.25	1970	61.56	1980	61.88	1990	62.19
2000	62.50	2010	62.81	2020	63.12	2030	63.44	2040	63.75
2050	64.06	2060	64.38	2070	64.69	2080	65.00	2090	65.31
2100	65.62	2110	65.94	2120	66.25	2130	66.56	2140	66.88
2150	67.19	2160	67.50	2170	67.81	2180	68.12	2190	68.44
2200	68.75	2210	69.06	2220	69.38	2230	69.69	2240	70.00
2250	70.31	2260	70.62	2270	70.94	2280	71.25	2290	71.56
2300	71.88	2310	72.19	2320	72.50	2330	72.81	2340	73.12
2350	73.44	2360	73.75	2370	74.06	2380	74.38	2390	74.69
2400	75.00	2410	75.31	2420	75.62	2430	75.94	2440	76.25
2450	76.56	2460	76.88	2470	77.19	2480	77.50	2490	77.81
2500	78.12	2510	78.44	2520	78.75	2530	79.06	2540	79.38
2550	79.69	2560	80.00	2570	80.31	2580	80.62	2590	80.94
2600	81.25	2610	81.56	2620	81.88	2630	82.19	2640	82.50
2650	82.81	2660	83.12	2670	83.44	2680	83.75	2690	84.06
2700	84.38	2710	84.69	2720	85.00	2730	85.31	2740	85.62
2750	85.94	2760	86.25	2770	86.56	2780	86.88	2790	87.19
2800	87.50	2810	87.81	2820	88.12	2830	88.44	2840	88.75
2850	89.06	2860	89.38	2870	89.69	2880	90.00	2890	90.31
2900	90.62	2910	90.94	2920	91.25	2930	91.56	2940	91.88
2950	92.19	2960	92.50	2970	92.81	2980	93.12	2990	93.44
3000	93.75	3010	94.06	3020	94.38	3030	94.69	3040	95.00
3050	95.31	3060	95.62	3070	95.94	3080	96.25	3090	96.56
3100	96.88	3110	97.19	3120	97.50	3130	97.81	3140	98.12
3150	98.44	3160	98.75	3170	99.06	3180	99.38	3190	99.69
3200	100.00	3210	100.31	3220	100.62	3230	100.94	3240	101.25
3250	101.56	3260	101.88	3270	102.19	3280	102.50	3290	102.81
3300	103.12	3310	103.44	3320	103.75	3330	104.06	3340	104.38
3350	104.69	3360	105.00	3370	105.31	3380	105.62	3390	105.94
3400	106.25	3410	106.56	3420	106.88	3430	107.19	3440	107.50
3450	107.81	3460	108.12	3470	108.44	3480	108.75	3490	109.06
3500	109.38	3510	109.69	3520	110.00	3530	110.31	3540	110.62
3550	110.94	3560	111.25	3570	111.56	3580	111.88	3590	112.19
3600	112.50	3610	112.81	3620	113.12	3630	113.44	3640	113.75
3650	114.06	3660	114.38	3670	114.69	3680	115.00	3690	115.31
3700	115.62	3710	115.94	3720	116.25	3730	116.56	3740	116.88
3750	117.19	3760	117.50	3770	117.81	3780	118.12	3790	118.44
3800	118.75	3810	119.06	3820	119.38	3830	119.69	3840	120.00
3850	120.31	3860	120.62	3870	120.94	3880	121.25	3890	121.56
3900	121.88	3910	122.19	3920	122.50	3930	122.81	3940	123.12
3950	123.44	3960	123.75	3970	124.06	3980	124.38	3990	124.69
4000	125.00	4010	125.31	4020	125.62	4030	125.94	4040	126.25
4050	126.56	4060	126.88	4070	127.19	4080	127.50	4090	127.81
4100	128.12	4110	128.44	4120	128.75	4130	129.06	4140	129.38
4150	129.69	4160	130.00	4170	130.31	4180	130.62	4190	130.94
4200	131.25	4210	131.56	4220	131.88	4230	132.19	4240	132.50
4250	132.81	4260	133.12	4270	133.44	4280	133.75	4290	134.06
4300	134.38	4310	134.69	4320	135.00	4330	135.31	4340	135.62
4350	135.94	4360	136.25	4370	136.56	4380	136.88	4390	137.19
4400	137.50	4410	137.81	4420	138.12	4430	138.44	4440	138.75
4450	139.06	4460	139.38	4470	139.69	4480	140.00	4490	140.31
4500	140.62	4510	140.94	4520	141.25	4530	141.56	4540	141.88
4550	142.19	4560	142.50	4570	142.81	4580	143.12	4590	143.44
4600	143.75	4610	144.06	4620	144.38	4630	144.69	4640	145.00
4650	145.31	4660	145.62	4670	145.94	4680	146.25	4690	146.56
4700	146.88	4710	147.19	4720	147.50	4730	147.81	4740	148.12
4750	148.44	4760	148.75	4770	149.06	4780	149.38	4790	149.69
4800	150.00	4810	150.31	4820	150.62	4830	150.94	4840	151.25
4850	151.56	4860	151.88	4870	152.19	4880	152.50	4890	152.81
4900	153.12	4910	153.44	4920	153.75	4930	154.06	4940	154.38
4950	154.69	4960	155.00	4970	155.31	4980	155.62	4990	155.94
5000	156.25	5010	156.56	5020	156.88	5030	157.19	5040	157.50
5050	157.81	5060	158.12	5070	158.44	5080	158.75	5090	159.06
5100	159.38	5110	159.69	5120	160.00	5130	160.31	5140	160.62
5150	160.94	5160	161.25	5170	161.56	5180	161.88	5190	162.19
5200	162.50	5210	162.81	5220	163.12	5230	163.44	5240	163.75
5250	164.06	5260	164.38	5270	164.69	5280	165.00	5290	165.31
5300	165.62	5310	165.94	5320	166.25	5330	166.56	5340	166.88
5350	167.19	5360	167.50	5370	167.81	5380	168.12	5390	168.44
5400	168.75	5410	169.06	5420	169.38	5430	169.69	5440	170.00
5450	170.31	5460	170.62	5470	170.94	5480	171.25	5490	171.56
5500	171.88	5510	172.19	5520	172.50	5530	172.81	5540	173.12
5550	173.44	5560	173.75	5570	174.06	5580	174.38	5590	174.69
5600	175.00	5610	175.31	5620	175.62	5630	175.94	5640	176.25
5650	176.56	5660	176.88	5670	177.19	5680	177.50	5690	177.81
5700	178.12	5710	178.44	5720	178.75	5730	179.06	5740	179.38
5750	179.69	5760	180.00	5770	180.31	5780	180.62	5790	180.94
5800	181.25	5810	181.56	5820	181.88	5830	182.19	5840	182.50
5850	182.81	5860	183.12	5870	183.44	5880	183.75	5890	184.06
5900	184.38	5910	184.69	5920	185.00	5930	185.31	5940	185.62
5950	185.94	5960	186.25	5970	186.56	5980	186.88	5990	187.19
6000	187.50	6010	187.81	6020	188.12	6030	188.44	6040	188.75
6050	189.06	6060	189.38	6070	189.69	6080	190.00	6090	190.31
6100	190.62	6110	190.94	6120	191.25	6130	191.56	6140	191.88
6150	192.19	6160	192.50	6170	192.81	6180	193.12	6190	193.44
6200	193.75	6210	194.06	6220	194.38	6230	194.69	6240	195.00
6250	195.31	6260	195.62	6270	195.94	6280	196.25	6290	196.56
6300	196.88	6310	197.19	6320	197.50	6330	197.81	6340	198.12
6350	198.44	6360	198.75	6370	199.06	6380	199.38	6390	199.69
6400	200.00	6410	200.31	6420	200.62	6430	200.94	6440	2

DON'T BE FOOLED:

Old man winter stopped Hitler, but don't be fooled into believing that cold weather has stopped the weevil in your grain bin.

The temperature of your grain is not readily influenced by the outside temperature. The temperature of your grain may never become low enough to stop insect activity.

Thus, stored grain insects may carry on their insidious devastation throughout the winter months—

Don't let this happen to your grain—

Use

Weevil-Cide
The
DEPENDABLE
GRAIN FUMIGANT

**THE 3 TO 1 CHOICE
OF THE
GRAIN TRADE**

THE **Weevil-Cide** COMPANY
THE DEPENDABLE GRAIN FUMIGANT

1110 HICKORY STREET
KANSAS CITY, MO.

GRAIN & FEED JOURNALS

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Charles S. Clark, Manager

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GRAIN DEALERS JOURNAL
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Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improving of grain, feeds and seeds.

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THE ADVERTISING value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

CHICAGO, ILL., DECEMBER 23, 1942

WITH the civilized nations of the world embroiled in the greatest conflict of all time, all of the participants are doubly glad to celebrate another birthday of the great Apostle of Peace on Earth, Goodwill to Men, and the staff of the Grain & Feed Journals Consolidated is doubly happy once again to wish our readers a Merry Christmas and a Prosperous New Year. May the Peace all now earnestly long for soon be the World's prized possession.



IF MORE grain merchants would build grain elevators of concrete or feed their friendly rats red squill, less food intended for humans would be despoiled by the dirty rodents.

COMPENSATION insurance for employees injured while performing their regular elevator duties is so inexpensive the relief from worry over suits for damages more than justifies its cost.

THE FARM PROGRAM for 1943 calls for an increased production of 16% but with conflicting ceilings, market and loan values confusing producers and processors no one knows the safe thing to do.

THE MOVEMENT of grain and beans from the farm is being suspended until the law makers and the bureaucrats amending or ignoring the statutes change their regulations and limitations so millers and processors can continue business without going broke.

HEAVY SPIKES are not needed to keep grain doors in place, because the pressure of bulk grain is ample. One nail to each board will be ample to prevent shifting. A forest of spikes is a waste of iron and hastens the destruction of the grain door.

EVERY COUNTRY GRAIN merchant will be pleased to learn that the two robbers who attempted to hold up a grain elevatorman and his helper at Mantua, Ohio, last month, have come to grief. One was shot by the police at Cleveland, and the other is in durance vile awaiting trial.

THE GRAIN dealer who tries to make out all the reports required by the Wage and Hour law, the Social Security law, the Sales Tax, the Income Tax laws, and the different ration cards, is sure to become a proficient accountant, but we suspect that his greater attainment will entitle him to the sobriquet of Prince of Profanity.

THE ECONOMICAL DISPOSAL of corn cobs has long been one of the pressing problems of country elevator operators of the corn belt. Cob burners, hopped bins to lure the farmer into hauling away another load, permitting towns people to help themselves to fuel for quick fires has helped reduce the cob pile back of the elevator for many dealers. However, some day the manufacturer of floor cleaner, the gas maker who is equipped to use cobs for purifying operations will find a more profitable outlet for this byproduct. Enterprising chemists claim to have found something in corn cobs that can be used most efficiently in the refining of lubrication oils, so it is entirely possible that this burden to the corn shellers of the land may lead to the development of a profitable market for a byproduct that has long been a burden.

A HARTINGTON, NEBR., elevator manager who recently completed 30 years of service without a single day's absence now wears a new, gold wrist watch as a recognition of his dependable service. The reward was well earned.

IN AN EFFORT to reduce power bills and obtain time for cleaning up the feed mill and putting it in condition to attract customers, many operators are now running but three days a week and refusing to waste power in starting their machinery on off days.

ONE OF THE encouraging items found in this number comes from Mitchell, Nebr., where two thieves have been sentenced to the penitentiary for helping themselves to the portable property of the local grain merchant. More vigilance and more securely locked plants will help to reduce the activities of these pilferers.

EVERYONE WHO HAS burned a lot of midnight oil filling out questionnaires of doubtful value for Washington bureaucrats will be glad to know that the Senate has given the Budget General control over the issuance of any more puzzle sheets without his O.K. This most welcome action will not peeve the recipients of questionnaires in the least.

FOR YEARS country elevators have had a weakness for changing ownership at the beginning of the crop year, but of late many have switched from old established firms to newcomers. Why, we have not yet been able to discover, excepting that some ownerships have been changed because loyal grain dealers are going to war, and in this number fifteen transfers are reported.

SOYBEANS HAVE BEEN attracting so much attention among grain handlers of the land they will be slow to move over and make room for hemp, but the Defense Administration is letting contracts for a number of new hemp mills in different parts of the corn belt that will effect some shrinkage of the acreage planted to other farm crops. So, grain elevator operators will find it to their advantage to study up the best markets for the new product and be ready to ship it to advantage when the crop is harvested.

IT IS MOST ENCOURAGING to find so many enterprising grain merchants refusing to be buncoed by the regulations requiring priority permits and Certificates of Necessity. The Pomeroy, Wash., company which built a new elevator without any permits as illustrated elsewhere in this number is emulated by a Missouri grain firm which has constructed a corn elevator of native oak lumber and salvaged pine. Some firms refuse to be discouraged by regulations and go right ahead providing needed improvements without violating regulations and restrictions.

LONG DARK NIGHTS are helping midnight marauders to spot unguarded grain offices where they help themselves to portable property like typewriters, adding machines, radios and check protectors, which are so difficult to replace. If grain dealers who suffer will give us the number and the make of each machine stolen, we will advertise it, to the trade, free of charge in the hope of recovering some of the stolen property.

THE TERM "agricultural commodities," according to the General Counsel, includes animals, birds and insects raised on the farm, as was clearly explained in a recent number, so farmers raising weevil, corn borers, angoumois moths, and bran bugs are regular farmers, and grain buyers must inspect all offerings thoroughly, so as to avoid taking in bugs with grain. The longer grain is stored without turning the better the bugs like it.

CORPORATE SURETY on the blanket indemnity bonds given receivers of shipments to guarantee payment of drafts attached to order Bs/L when the papers are not available for surrender to carrier will not be required as proposed in an amendment to the Consolidated Freight Classification. After a hearing in New York the carriers abandoned the proposal. Vigorous objections voiced by shippers saved them from this costly innovation.

GOVERNMENT operation of railroads in 1918 increased the number of employees 6 per cent to handle an increase in traffic units of 5 per cent. Private operation in 1942 handled an increase of 33 per cent in freight and 74 per cent in passengers with an increase of but 12 per cent in employees. Expenses under government operation increased 38 per cent. To handle 8 times as great increase in traffic private operation costs increased only 26 per cent. The railroads paid six times as much taxes in 1942. On the record, therefore, government taking over the railroads is not warranted.



Increasing Elevator Accidents

While it is natural that new and inexperienced helpers in every grain elevator should suffer because of their unacquaintance with the hazards of moving machinery, frequent warnings by employers has helped to reduce accidents and saved both lives and limbs. However, our news columns continue to reflect ominous warnings to alert workers through unnecessary fatal accidents.

Among those recorded in this number are the fatal accident to a Fort William, Ont., worker who fell from a box car and suffered injuries which proved fatal. An Indiana worker permitted his hands to get into a wheat conveyor with painful results, but fortunately he still has his hand. A St. Paris, Ohio, worker, of long experience, permitted his loose clothing to be caught by a set screw of a drive shaft with disastrous results.

The exposed set screw has long been one of the greediest of all machinery for loose clothing and more lives and limbs have been sacrificed to its toleration than almost any other piece of machinery in the elevator. The dangerous feature of the exposed set screw is so easily minimized through the use of a collar or a depressed hole in the shaft the continued employment of set screws is inexcusable. The continued use of the exposed set screw has cost so many lives and limbs machinery owners should do away with it without any hesitation.

Need for More and Better Grain

The increasing demand for bread and meat should stimulate all grain growers' deeper interest in an active campaign to stop sowing weeds and devote their acres to the increased production of food and feedstuffs. Every country elevator operator who is equipped to clean seed should persistently advise his farmer patrons of that fact and encourage them to pay him for cleaning all seed now, and thereby avoid the unnecessary acceptance of 1943 grain heavily laden with weed seeds. By reducing the crop of weed seeds grain buyers should be able to escape paying freight on rubbish, and having their shipments docked for foreign matter, thereby improving the grading and increasing the returns.

Country elevator men who are well equipped to clean seed thoroughly never hesitate to assess farmers a liberal charge for the cleaning and many buyers in southern Illinois and Indiana pay a premium of three cents a bushel for grain grown from seed they have cleaned, thereby preventing the congestion of their storage facilities with garlic and other weed seeds.

The splendid work of the crop improvement associations and the agricultural experiment stations in interesting grain growers to exercise greater care in selecting clean seed of accepted varieties is also contributing to the general

improvement in both the quality and quantity of grain grown making its production more profitable for the farmer and less hazardous for the man who attempts to market the crop.

The urgent demand of the Allied nations for more and more food should also help to stimulate the interest of growers and handlers in contributing to the hungry nations of more food as urged by the Department of Agriculture.

The Corner in Feed Ingredients

Out of the total of millions of farmers in the United States several hundred thousand purchase and feed protein supplements, as and when needed. And of these perhaps thousands are now unable to buy protein feeds, their united protests making a clamor out of proportion to the cause of complaint, which has been taken up and magnified by the midwestern agricultural colleges.

Just because the big feed manufacturers, by strenuous endeavor, have been able to supply part of their trade with mixed feeds containing the needed supplements a cry has risen that they have cornered the supply of protein feeds.

This allegation is without foundation in fact. Every year the feed manufacturers make it a practice to contract for what they need when the ingredient is freely offered and readily obtainable, not to corner the market but to insure the continuous operation of their feed mixing machinery. They have not more than they need, and some large mills have had to shut down on account of the shortage.

Nearly three months ago, Oct. 3 to be exact, a soybean oilmeal manufacturer in Iowa sent an order blank to 300 feed dealers in northeast Iowa quoting the floor price on meal and urging purchases for October, November and December. Only 7 out of the 300 responded with bookings, and for only 95 tons. In this letter the processor told them he would not sell the big mixers or the jobbers until the small dealers had been given a chance to book all they needed.

The same manufacturer on Oct. 12 wrote a letter to 1,800 farmers in northeast Iowa using soybean oil meal, urging them to place orders with their dealers for meal requirements up to Jan. 1; but not a single ton of meal was sold. As a result the processor had to turn to the jobbers, distributors and brokers for an assured outlet to keep his plant running.

The ceiling price set on meal by the C.C.C. made that the cheapest of the supplements, with the effect that demand was concentrated, especially since tankage, meat scraps, fish meal, and other animal proteins were scarce. The result is that the processors were sold away ahead and for months.

The number of grain consuming animals has been increased, and they are being fed longer and to heavier weights. The war has reduced imports of tankage, fish meal and other animal proteins. Even

tho the country has an abundance of soybeans the processing capacity has not been adequately expanded.

Gondola Cars for Grain

The experiments conducted by the A. T. & S. F. R. R. in the use of gondola cars for shipping grain will surely be closely watched by every grain shipper and terminal elevator operator. Some shipments have been made in Santa Fe gondolas which weighed out twice the average load of a box car. The general use of gondola cars for transporting grain and the increase in the weight of each load would greatly increase the dealers' shipping hazards and call for the careful inspection of every gondola car offered for grain, as well as encourage thieves to help themselves to the shippers' grain. In view of the fact that many wayside pilferers now bore holes in the floor of box cars to get grain, it would be likely that the ease with which thieves could lift the tarpaulin and help themselves to the gondola's contents would encourage stealing and multiply losses in transit.

The shipment of damp grain in such large loads would increase the loss due to heating and shipments in gondolas would occasionally encounter rainy weather, which would further contribute to heating of shipments in transit.

No doubt the use of gondola cars with hopped bottoms would facilitate and expedite the unloading of grain shipments at destination and necessitate the speeding up of receiving facilities at every terminal elevator. Increasing the average load of grain shipped from 1500 to 3000 bu. would greatly reduce the number of

cars needed to market a crop, and expedite the release of carriers' rolling stock, as well as prevent the congestion now common in embargoed markets at harvest time.

The rail carriers can rest assured that grain shippers will not favor the use of gondola cars for the transportation of their grain until gondola cars have been given a thorough try-out without disastrous results to the owners of the grain.

United States Blessed with Large Crops

Altho the largest harvest previously on record was in 1937 that of 1942 tops that by 12 per cent. It is 14 per cent larger than in 1941 and breaks all records.

While cotton, potatoes and tobacco show production considerably above average, corn stars as the leader. This was made possible by favorable weather and the planting of hybrid seed. The crop of 3,175,000,000 bus. is 100,000,000 bus. larger than the next largest produced, that of 1920. The yield of 35.5 bus. per acre is astonishing. It is 3.8 bus. heavier than in any other year and 50 per cent above the 1930-39 average. The Iowa average yield was 61.5 bus. per acre. This state alone produced over half a billion bushels of corn.

Record production of feed and forage crops gives assurance of continued heavy livestock output.

Large crops are the forerunner of activity in their handling and processing. They promise good business for the grain merchant and for the operator of the grain elevator, who should be recognized as essential to the war effort and given priority for necessary equipment.



Warranty of Chicks

The Supreme Court of Vermont on Jan. 2, 1942, gave J. R. Preston judgment against Montgomery Ward & Co. for breach of warranty in the sale of chicks.

The contract called for 350 day old Red Rock chicks, at least 90 per cent pullets. Several weeks later when they had feathered out it was found they were not Red Rock, but Rock Red chicks, and later that the percentage of pullets was far less than contracted.

Failing to obtain satisfaction from seller, Preston bought the same number of chicks from Leonard Poirier, of the same guaranteed breed and paid Poirier \$105 difference.

Defendant claimed the judgment should have been entered for \$35, which was the difference between the value of the chicks delivered and what would have been their value had they been as warranted on the date of delivery.

The court said the plaintiff could not reasonably be expected to discover that the chicks were not of the breed and sex warranted until several weeks after they had been delivered to him. During all the time he had to feed and care for them. The Supreme Court awarded the full amount claimed, \$105.—23 *Atl. Rep.* (2d) 534.

Rise in Bag Market Does Not Cancel Bag Contract

Dave Goldstein, doing business as Superior Bag & Burlap Co., Norfolk, Va., had been dealing for five years with Old Dominion Peanut Co. and on Jan. 20 and May 9 contracted to sell 10,000 bags at \$70.00 per thousand and 30,000 at \$67.50 per thousand. On March 18, 1939, when 25,522 bags had been shipped, Goldstein asked for shipping instructions on the balance. Directions were given and shipment was made to close contract of Jan. 20. On July 6, 1939, 3,094 bags were delivered on the contract of May 9, 1938.

On Sept. 5, 1939, the Old Dominion wrote Goldstein it was just starting up its plant at Suffolk, Va., and asked delivery of remaining bags. On Oct. 23, 1939, Goldstein wrote repudiating the contract, refusing to make further deliveries. The Old Dominion then bought the needed bags from the Planters Nut & Chocolate Co. at \$130 per thousand, which was much below the current market price.

The Old Dominion Peanut Corporation brought suit for damages for breach of contract and was awarded the difference in price, amounting to \$1,167.19, with interest.

Goldstein took an appeal from the Norfolk Court to the Supreme Court of Appeals of Virginia, where the judgment was affirmed.

The Supreme Court held that a seller who waived provisions of contract requiring delivery of burlap bags by certain date could not claim that it would be inequitable to require him to pay to buyer difference between contract price and price paid in purchasing bags in open market, because European war occasioned large advance in price of burlap, where evidence disclosed that at time war broke out seller had burlap on hand, that he had other contracts in force at comparable price and that he filled them, and that seller always bought burlap for future delivery to protect himself against the market.—15 *S.E. Rep.* (2d) 103.

To Grain Dealers Everywhere

It was nearing the hour of midnight, and a full moon shed its bright rays over the sleeping city of Bethlehem.

To the multitudes it was only another night. Doubts possessed them; hope had fled them, while their devotional fires had long since died upon their altars.

The night held in its grasp all the forebodings of a dim, dead past. Faith and Hope were but a memory redrawn from wells that had now run dry.

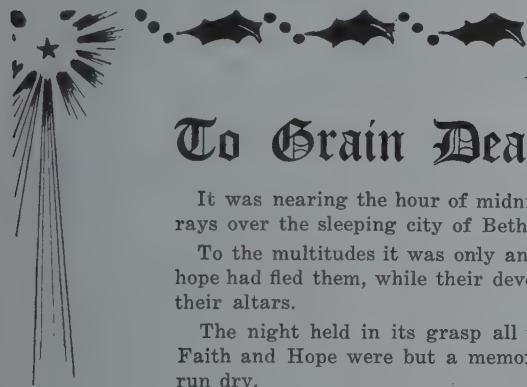
For 400 years Heaven had been silent, and then, as now, questioning minds were saying, "Has Heaven a message for such an hour as this?"

Yes, for during those dark hours in the World's history God was seen by the wise men of old hanging a service star in the window of Heaven; for He, too, had a son at the battle front.

It is this star that has now become The Star of Hope. And beneath its guiding rays men press on to the task that is theirs to do.

At this Christmas time may The Star of Hope guide us through the darkness of this hour into the light of a new and better day.

S. L. RICE, President,
The Grain and Feed Dealers National Association.



Asked—Answered

[Readers desiring trade information should send query for free publication here. The experience of brother dealers is most helpful. Replies to queries are solicited.]

Regulations on Sale of Government Feed Wheat

Grain & Feed Journals: What are the latest rules and regulations pertaining to government wheat to be sold for feed?—L. P. Cook & Son, Memphis, Tenn.

Ans.: The regulation states that the Regional Director in the area where the processing plant is located will designate the distribution territory within which freight and price adjustments will be made.

A special regulation allows a feeder or trucker to buy wheat outside his county, under a certificate.

C.C.C. Wheat Form No. 7 is filled out with name of buyer, car number, final destination, transit application, rate paid, invoice price, cost delivered, delivered parity price, weight, and the amount of refund.

C.C.C. 1942 Wheat Form 4 contains the agreement with the local dealer or agent.

C.C.C. Wheat form 1, revised, contains the original terms and conditions of feed wheat sales program.

C.C.C. 1942 Wheat Form 2 (Revised-A) is for processors or dealers selling whole feed wheat or processing whole feed wheat.

Market for Corn Cobs?

Grain & Feed Journals: We have heard there is a market for corn cobs, but we do not know the facts as to where and what there is in it. Any information on the subject would be greatly appreciated.—Sharp Elevator, Adrian, Ill.

Ans.: A suggestion was made years ago by M. C. Elean, of Kingston, Ia., that the cobs be molded into bricks by machine, with starch to hold the material together and just a little fuel oil, to make the very best of fuel.

The Bureau of Chemistry of the U. S. Dept. of Agriculture has worked out a process for making four products out of cobs. One is a light glue, another a dark glue, third a high grade cellulose, and fourth, acetate of lime.

The light colored glue is obtained by heating the cobs with water in a digester under pressure and evaporating the water. This is the Kutztown system used in garbage reduction.

Corn cob meal has been used in the tinplate manufacturing industry to clean palm oil off the sheets of metal. The oil gives feed value to the meal.

Ground corn cobs have been used in preparing a material for the purification of illuminating gas, by removing the objectionable sulphur.

One ton of dry corn cobs, when burned, yield 40 pounds of ashes containing 30 to 40 per cent potash. It will pay to ship the ashes to soap manufacturers.

To be economical most processes would require a large volume of cobs, and unfortunately the cobs are bulky and of little value, so can not be shipped profitably.

Cobs can be utilized where a large quantity is available at one location. For example oat hulls are made into furfural; and at the present time feeders can not get cottonseed hulls because they are now being used to make furfural.

Reorganization of U.S.D.A.

Claude R. Wickard on Dec. 10 reorganized the Department of Agriculture in line with the president's executive order of Dec. 5.

The Department is regrouped into three major administrative units, Food Production, Administration, the Food Distribution Administration, and the Agricultural Research Administration. Two are new agencies, established under the executive order of Dec. 5.

Agencies now within the Department consolidated into the Food Production Administration are the Agricultural Conservation and Adjustment Administration (except the Sugar Agency); the Farm Credit Administration; the

Farm Security Administration; that part of the Division of Farm Management and Cost of the Bureau of Agricultural Economics concerned primarily with the planning of current agricultural production; and that part of the Office for Agricultural War Relations concerned primarily with food production.

Agencies now within the Department consolidated into the Food Distribution Administration are the Agricultural Marketing Administration; the Sugar Agency of the Agricultural Conservation and Adjustment Administration; that part of the Bureau of Animal Industry of the Agricultural Research Administration concerned primarily with regulatory activities; and that part of the Office for Agricultural War Relations concerned primarily with food distribution.

Why Your Sheller Wastes Corn

By CARL F. BERGER
of the Sidney Grain Machinery Co.

A great deal of corn is moving now, and with much of it the picker or unhusked type of corn, elevator men should pay close attention to their corn shelling and corn cleaning equipment to save as much as possible of the corn from going to the cob pile.

There should be no waste of corn and a simple checkup on equipment will save a lot of money in cleaner cobs. Naturally, the corn must first be shelled clean from the cobs and to do this, check up on your shellers and see that they are in efficient working condition. Check up on the adjustments, also see that some of the lugs on the cylinders and on the top and bottom jackets are not broken off, and be sure the cylinder is on tight, so when the adjustment is made the cylinder will not move away from its proper location.

Check the bearings to see that the shaft is lined up properly, so you will have equal openings around the cone, and when the adjustment is made, see that it will not leave large openings in one place and real small spaces in another.

If your sheller cylinder is worn or the top and bottom jackets have the lugs off, or if the sheller bearings or shaft are worn, it will pay you to check into this carefully as a lot of corn can be saved by proper adjustment and operation of corn shellers.

Most shellers have adjustments to take care of wet corn, also corn with husks, and for clean, dry corn, the position of the sheller adjustment being different for different classes of corn. In making these adjustments, it is necessary that the shaft and bearings be in good condition and the cylinder be tight on the shaft. If the lugs, which do the shelling, are not worn or broken off, this adjustment should enable operator to shell clean practically any kind of corn.

After shelling there is some loss of shelled corn too by going over the cleaner and out with the husks. This is a problem which is often hard to remedy, but if you check up on your particular cleaner, especially at the speed at which it operates, it may enable you to save a lot of this shelled corn from going out with the husks.

Hecker Products stockholders will vote Dec. 29 on a merger with Best Foods, Inc., Hecker having recently purchased the 29% interest of General Foods in Best Foods.

Washington News

Chairman Fulmer of the House agriculture committee says the resignation of Leon Henderson, O.P.A. head, will in no way affect his plans to reintroduce the parity revision bill.

Instead of appealing to the president as formerly the president has vested in Jas. F. Byrnes, stabilization director, authority to arbitrate disputes involving the Office of War Food Administration, recently created with Claude Wickard at the head.

"Washington has become a city where a large portion of the population makes its living not by taking in one another's washing, but by unreeing one another's red tape," says Senator Harry S. Truman, chairman of the special committee to investigate the national defense program.

The Senate agriculture committee on Dec. 14 approved a resolution authorizing an inquiry into charges that government agencies have defied Congress in fixing the price of flour and other foodstuffs, and an inquiry into subsidies being paid farmers and handlers of farm products.

Additional December allocations of chemicals to civilian industry, including copper chemicals, were announced Dec. 15 by the chemicals division of the War Production Board. No restrictions were placed on end use. Inventories were held to a 30-day level. Copper carbonate dust is used on seeds as a fungicide.

The U.S.D.A. has announced a new subsidy program to expedite the export of wheat to Mexico, Cuba, Columbia, Ecuador, Venezuela and Central America. Under the program it will pay bounties to exporters on sales made for export to these countries. The export rate will be announced from time to time. The initial rate will be 20 cents a bushel.—P.J.P.

Grain alcohol plants will be erected at Muscatine, Ia., Kansas City, Mo., and Omaha, Neb., Bradley Dewey, assistant rubber director, announced Dec. 17, at a senate agriculture subcommittee hearing. The Omaha plant will be operated by the Farm Crops Processing Corporation of Nebraska, and the Muscatine plant by the Grain Processing Corporation of Iowa.

"The bureaucrats are running wild," says Senator Vandenberg. "They are flooding the country with ponderous questionnaires which do not only demand a detail of information which it is impossible for the average business man or average citizen to answer, but which also strike positive terror to the hearts of citizens who wish to be totally loyal yet who find their loyalties channeled into maddening inquiries."

H. E. Foreman, managing director of the Associated General Contractors, testified before a committee at Washington that the filling out of government reports had increased the overhead cost of the general contracting business by 50 per cent, which amounted to a 10 per cent increase in the total cost. "Executives of contracting firms used to spend 80 per cent of their time in the field supervising construction," Foreman said. "Now they spend 80 per cent of their time in the office supervising the filling out of forms."

A grade-substitution program expected to reduce the consumption of chemical nitrogen in mixed fertilizers by approximately 20 per cent was instituted Dec. 4 by the Director General for Operations thru issuance of General Preference Order M-231 as amended. Schedule B of the amended order lists the grades of fertilizer, by nitrogen content, used during the 1940-41 season in the respective states. Opposite these are the approved grades which are to be substituted in 1942-43. Fertilizer manufacturers are required to produce the approved 1942-43 grades in the same proportion as the 1940-41 grades.

Definition of a Washington coordinator: One who makes organized chaos out of regimented confusion.—The Hookup.

Soybean Grading Procedure

When the user of lax grading practices gets the same grading results as a licensed inspector he is to be congratulated upon his good fortune rather than upon his good judgment. There is but one correct procedure for grading samples of each grain. The U.S.D.A. method is official. It is the standard by which all other results are judged.

Correct soybean grading procedure begins with taking a sample. The official method uses a probe. Thrust the probe down at five or more points in the load until it strikes bottom. Mix the resulting samples by quartering or by running thru a divider to reduce the quantity to the proper size.

Next best method is to catch small scoops full out of the load as it is discharged into the elevator's receiving pit by swinging a hand scoop thru the stream of grain as it falls. Done systematically this method will catch small samples of every part of the load. These can be mixed and divided down to the proper size.

Official soybean grading procedure calls first for smelling the sample to determine presence of musty, sour, or commercially objectionable foreign odors. Stick the nose right down into the grain. Distend the nostrils. Inhale in such manner as to catch any distinct foreign odors. Note such odors as are a grading factor.

Next step is the moisture test. Official standards specify the air oven, or a method which will give equivalent results. Equivalent results may be obtained with the Tag-Heppenstall, and the Steinlite electric moisture meters, and the Brown-Duvel moisture tester. These instruments must be properly calibrated. A part of the equipment with every electric moisture tester is a conversion chart for each grain, and full directions for using. Follow these directions to the letter. Brown-Duvel moisture testers are accurate only if kept reasonably clean, if the 100 gram sample of soybeans is immersed in 150 cc. of the proper kind of waxfree oil, and if the temperature rises to 173 degrees F. in 20 minutes.

Next determine dockage. Use plenty of elbow grease with the hand sieves. The soybean hand sieve is made of 20 gauge metal, and has round-hole perforations 8/64th inch in diameter. Hold the sieve in both hands, directly in front of the body with elbows close to the sides. Hold it level, and shake with a steady, sieving motion, moving the sieve from right to left and back again about 10 inches, 15 times. Repeat this procedure on suitable portions of the entire sample until you have sieved out all of the dockage. Then weigh the dockage and figure the percentage as related to the weight of the original sample.

Next step is to test the weight per bushel on the dockage free sample of grain. Pour the sample in a standard funnel designed for the purpose. The 1½ inch opening of the funnel should be 2 inches above the rim of the test weight kettle. If you have no funnel make one and attach it to a stand of some kind to hold it 2 inches over the kettle when used. Use a regulation wood stroker to level off the kettle. Uniform, standard test bucket filling procedure is important. Wide variations in test weight determinations are possible from seemingly minor variations in procedure. Scooping the bucket full with the hands gives different im-pactions from a 1½ inch stream dropping from 2 inches above the kettle.

Now establish the class. This is easy. There are but five classes. Most commercial soybeans are yellow, or green. If the grade so far established is No. 1 Yellow or Green soybeans the sample may contain no more than 2 per cent of black, brown or bicolored beans, singly or in combination; if No. 2, not more than 3

per cent. If more than 5 per cent of these admixtures are present the classification is Mixed.

Next step is to pick for splits and damage, where present in sufficient quantity to affect the grade. Official practice is to pick a 125 gram representative portion of the sample. Percentages by weight are figured a little more easily but less accurately with a 100 gram sample.

Splits are pieces of soybeans that are not damaged. If ¼ or less of a soybean is broken off the bean is not considered as split, but the piece broken off is. Separation of broken portions is facilitated by a slotted sieve.

Pick out damage. A pair of tweezers is helpful. Cross-section frosted soybeans with a sharp knife or a razor blade that leaves a smooth interior surface for examination. Cross-section heat damaged beans similarly. Damage must be distinct to be classified as damage. It must be sufficiently apparent to be recognized as damaged for commercial purposes.

Final step is to determine the grade. Determine the grade by the lowest grading factor. It's a good idea to make a little card showing how

the beans graded. This helps convince the farmer of fair treatment at settlement.

Country shippers can skip some steps in this procedure at times when few grading factors establish the grade.

For official U.S.D.A. soybean grade requirements and detailed instructions on how to grade soybeans, see pages 252-253 of the Sept. 23 number of the Journals.

Photos herewith illustrate the full procedure as carried out by the hands of Willis B. Combs, noted grain grading educator in the extension service of the U.S.D.A. Satisfactory country shipper practices are shown, but the equipment used is official. Some substitute equipment is available from supply houses which give equivalent results. For example, there is a funnel on a stand which may be set over a weight-per-bushel testing kettle, and a 4-in-one dockage scale which is less accurate than the finely balanced instrument shown, but adequate for the purpose, and capable of giving direct percentage readings.

The U.S.D.A. Extension Service has a number of bulletins describing grain grading procedure and grain grading instruments in detail; the Grain Grading Primer, for example, and the Handbook of Official Grain Standards. They are free for the asking if you address your inquiry to Grain & Feed Journals, or to U.S.D.A. Extension Service, 1108 Post Office Building, Chicago, Ill.



1. Start with representative sample. 2. Smell for foreign odors. 3. Test moisture content. 4. Sieve out dockage. 5. Fill weight-per-bushel kettle from funnel. 6. Use round edge, hardwood stroker and three zig-zag strokes. 7. Use accurate beam and kettle to test weight-per-bushel. 8. Tweezers help pick damage. 9. Razor blade makes clean cross-section. 10. Determine percent damage by weight. 11. Card showing grade and grading factors is convincing. 12. Willis B. Combs, Chicago.

Letters from the Trade

[The grain dealers' forum for the discussion of grain trade problems, practices and needed reform or improvements. Dealers having anything to say of interest to members of the grain trade are urged to send it to the Journals for publication.]

Wheat Rising Over Loan Level

Grain & Feed Journals: The present market will not permit the redemption of many commercially stored wheat loans, yet some of the lower grades are actually selling for more than the loan price plus charges. This is especially true of loans that were delayed for the lack of storage space at harvest time and where only one or two months warehouse charges and interest have accumulated.

All grades of wheat at this writing are selling at from 2¢ to 5¢ over the loan value, not considering accrued charges. Farm stored wheat at the present time may be sold to local elevators at from 3 to 5¢ over the farm loan value, which would give the producer a little margin as credit for farm storage and at the same time assure him of the use of his bins if needed next year.

Applications for loans cannot be made after Dec. 31, and with local markets now generally over the loan price, it is not expected that many more applications will be made and that much wheat that is now resting in farm storage on which application for loan has not been made may move to market as free wheat.

Storage space has become more plentiful at terminal and subterminal markets and the demand for same has declined to where permits generally are no longer necessary for the shipment of grain for storage.

All grain dealers should watch for further announcement by the OPA of any changes in the present flour ceiling as the wheat market will likely be affected by any change announced.—J. F. Moyer, sec'y Kansas Grain, Feed & Seed Dealers Ass'n, Dodge City, Kan.

Bills of Materials to Be Required Under C.M.P.

For the War Production Board its Controlled Materials Plan Division will hold regional meetings to give instructions in operating under the plan.

Following these meetings copies of the instructions may be obtained from field offices of the W.P.B.

The Plan is designed to balance the over-all production program within the available supply of controlled materials. The claimant agencies will be required to adjust programs and schedules within the limits of controlled materials allotted to them. Other materials will continue to be distributed thru the priority system. The Plan is sufficiently flexible to permit the inclusion of additional materials as controlled materials in the future, if necessary.

Prime consumers of controlled materials—aluminum, copper, steel—must submit their requirements for the second quarter of 1943 in the form of bills of materials to the claimant agency or agencies (Army, Navy, Maritime Commission, Civilian Supply, etc.) from which they will receive their allotments. Secondary consumers must file their bills of materials with their customers who, in turn, are responsible for their accuracy and who will include them in their own bills of materials submitted to the claimant agencies.

For most products, bills of materials will not be required from every producer. No company need prepare a bill of material unless specifically instructed to do so by a claimant agency, a WPB industry division or by another company to which it sells its product and which has been instructed to furnish a bill of material.

Watch Your Manlift's Danger Points

By J. C. KINTZ

At the top of the well for every hand operated manlift is a danger point that needs frequent inspection and sensible precautionary treatment. This is the sheave that carries the rope or cable that supports the manlift platform, and its shafts and bearings.

The shaft is short. If it rides in babbitt bearings it gradually wears these bearings oblong. Unfortunately the location of these bearings is such that they seldom receive needed lubrication.

The shaft is usually held in place with collars. Sometimes these collars, which take up side thrust, get loose. Sometimes they drop off. Then, if the bearing is worn oblong, it may allow sufficient clearance for the shaft to creep out.

It does not happen often, of course; maybe only once in a couple of thousand times or more. But when it does happen, the rider of the manlift gets pretty well banged up, because the whole platform is likely to drop with a clattering bang and smash into the basement floor, just the same as if the rope breaks.

The manlift supporting rope is another thing to watch. It is better to use a cable than a rope. We know of one case over in Illinois where the manager of the elevator failed to inspect the manlift regularly. The brakes did not work, and when a couple of inexperienced youngsters released the pin holding it, the lift started up. The youngsters jumped off quickly. Then the lift moved upward rapidly. It jammed against the stop at the top of the well, and its supporting rope was pinched against the sheave. Already well worn, the rope was unable to stand this severe treatment.

The manager of the elevator climbed the ladder to the top of the well to bring the manlift down. Everything went fine until he was well started down again on the manlift. Then the overworked rope's last remaining strands parted. The manlift dropped 40 ft. with its human burden to smash against the basement floor.

The elevator manager ended up in the hospital with both legs broken, a collar bone broken and innumerable cuts and bruises. He spent six months in the hospital, but it was a year and a

Coming Conventions

Trade conventions are always worth while as they afford live, progressive grain dealers a chance to meet other merchants from the same occupation. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Jan. 9, 10, 11. Farm Seed Division of American Seed Trade Ass'n, Palmer House, Chicago, Ill.

Jan. 11, 12. Northwest Retail Feed Ass'n, Hotel Nicolet, Minneapolis, Minn.

Jan. 13, 14. Oklahoma Seedsmen's Ass'n, Tulsa, Okla.

Jan. 25, 26. Indiana Grain Dealers Ass'n, Columbia Club, Indianapolis, Ind.

Jan. 26, 27. Farmers Grain Dealers Ass'n of Iowa, Warden Hotel, Fort Dodge, Ia.

Feb. 2, 3. Illinois Farmers Grain Dealers Ass'n, Peoria, Ill.

Feb. 16, 17, 18. Minnesota Farmers Elevator Ass'n, Hotel Radisson, Minneapolis, Minn.

June 7, 8. Central Retail Feed Ass'n, Hotel Schroeder, Milwaukee, Wis.

half before he could return to work, and he returned crippled for life.

Of course, things like that do not happen often. But they do happen. Inspect your manlift carefully and regularly and it will give you dependable service. Why take a chance with human life?

Safety of the New Helpers

By I. B. CAUTION

Three fatal accidents reported in a single recent number of this JOURNAL call attention to the pressing need for proper placement and instruction of new employees in grain elevators and grain processing plants of all kinds.

In one of these two men in apparent ignorance of the hazard got into a bin of screenings and were suffocated. In the other a new man who evidently had not been properly instructed went over the top of a continuous belt elevator.

Observation indicates and inquiry proves that labor turnover is causing alarming losses in life and property in industry generally, due in many cases to mistakes in placement and lack of instruction.

In a mid-western plant a sixty-four-year-old man hired at 8 o'clock in the morning was immediately put on a pile of lumber 8 feet high to pass boards down to waiting trucks. At 9:30 o'clock he fell from the lumber pile, fracturing his skull. It was learned later that he had high blood pressure and had been subject to dizzy spells.

The girl punch press operator lost three fingers of her right hand on a blanking operation. It was later discovered that she had such a high degree of uncorrected astigmatism as to prevent her from lining up the work properly. After recovery she was fitted with proper eyeglasses and returned to the same operation.

A man was hired for a job involving being on his feet constantly either standing or walking. Thirty days after employment he bumped his leg against the corner of a machine. The bump was one that ordinarily would have meant nothing. However, in his case it caused an ulcer that disabled him for three months, because it was found that he suffered from varicose veins and so was in such condition that the bump caused a varicose ulcer.

These are accidents that could have been prevented by proper examination and instruction of new employees.

New employees at this time should be told that they are trusted with their Country's priceless assets of manpower and foodstuff; that by saving them both they can help win the war through avoiding accidents and preventing fires; that common sense and constant care will do it. Careful cooperation of new men with older employees and the management is needed. For example:

Watch for hot motors.

Learn what lubricants are best and keep all bearings properly oiled.

Check fire extinguishers to insure where needed there is one in working order.

Keep weeds, brush, cobs and trash cleared away from the premises.

This is no time for children to play or strangers to loaf around the elevator.

If you are the last man out, THINK of any cause of fire you might be leaving.

Each time you see an electric light, wire or motor, look for defects that start fires.

Before grinding feed, make sure no tramp iron is there to set off an explosion.

Stop machinery when adjusting it and keep it stopped until repairing or adjusting is completed.

Ask about anything you are not familiar with, and take no chances.

Keep water-barrels filled and buckets handy.

Remember how to call the fire department in the quickest way.

Drop nothing that might hit someone.

Repair damaged stairs and ladders before using.

Lift with your legs and not with your back.
Sweep and clean, because a clean plant is safe.
Sweep and clean, because dirt, dust and disorder are dangerous.

Understand all about the truck hoist before you use it.

Use the truck hoist like the driver was yourself and the truck was yours.

Inquire all about the ins and outs of the manlift.

Shut the manlift down for repairs if necessary.

Smoke what you like when you like, *except* in grain elevators and flour mills.

Remove bags, boxes and barrels from floor spaces where men might stumble.

Invite your local fire chief to familiarize himself with your plant.

Watch stove or furnace, and shut down draft if you leave it.

Look for hot bearings before you lock up and go home.

Last thing before leaving, pull the entrance switches.

The Controlled Materials Plan is intended to expedite the flow of war materials into war production, but it will not change procedure to be followed by our grain and feed trade in filing forms for priority assistance. WPB Form PD-1A still must be filed in most instances to get a sufficiently high rating. In the meantime we are seeking to obtain here a special industry priority rating for grain and feed establishments, to simplify and speed procedure.—W. E. Culbertson, sec'y Illinois Grain Dealers Ass'n.

Farm Bureau Denounces Tugwellian Philosophy

At the annual meeting of the American Farm Bureau Federation at Chicago Dec. 10 resolutions were adopted declaring the following principles:

More Farm Machinery

Farmers are alarmed over the drastic curtailment of machinery, equipment, and supplies available for 1943. We emphatically urge that raw materials and supplies for 1944 be at least equal to that provided in 1942.

Maze of Rules and Regulations

All federal policies and programs must cut thru red tape, where rationing and other regulations are necessary, so that farmers can concentrate on production rather than spend time trying to interpret a maze of rules and regulations.

Parity Held Low

We urge the immediate discontinuance of all policies and practices that have for their purpose the deliberate holding of market prices below parity and that require continued appropriations if farmers are to secure parity returns.

Red Tape and Inefficiency

Federal regulations in many phases of civilian activity are so numerous, so confusing, and so onerous that the people have become bewildered and discouraged. Overlapping of functions and lack of coordination of effort among governmental agencies are hampering the war effort and rapidly are becoming notorious.

Civilians are constantly receiving from governmental boards and bureaus great quantities of forms and questionnaires to be filled out as a prerequisite to cooperation in various programs. Many of these documents are complex, vague, bewildering and unnecessary. Too often, rules and regulations prepared by persons who have no practical knowledge of actual conditions in the field are simply unworkable in practice.

Such a situation is discouraging and disheartening to the people.

Oppose Subsidies on Farm Products

We are unalterably opposed to the use of subsidies in lieu of fair prices in the market place at times when consumers are fully able to pay fair prices. We aggressively urge that present experiments in this field be abandoned and be replaced by action based on the more realistic policy of fixing retail price ceilings at levels which will reflect fair prices to the producers of farm products.

State Commissioners Assail Bureaucracy

At the recent annual meeting of the National Ass'n of Commissioners, Secretaries and Directors of Agriculture absolute removal of restrictions on farm production was demanded.

Ralph Moore of Texas, representing the Texas Commissioner of Agriculture, said:

"Unless something is done at once in the direction of increasing price ceilings on farm products there will definitely be a slow-down of production on farms which will materially imperil the American food supply, to say nothing of the needs of our troops abroad and our allies, whom we have pledged to feed.

"American farmers will not 'strike.' They are simply being forced to go out of business."

Peotone Elevator Has New Office

The office staff of the Peotone Farmers Elevator Ass'n, Peotone, Ill., consisting of Manager Louis H. Hauert, and his bookkeeper, Mrs. Ruth Temme, is housed in an attractive new office that incorporates all the up-to-date facilities of a modern country grain buying station.

The office is frame construction over a concrete block foundation, and has three rooms, one a main bookkeeping and customers' room, one a directors' meeting room, which also does duty as a private office when occasion demands, and one a combination waiting and merchandise display room.

Dimensions of the one-story structure are 32x24 ft., with a 12 ft. covered driveway over the 9x22 ft. scale deck at the side. The main office room is 24x16 ft. The directors' room is 10x16 ft. The merchandise display and waiting room is 9x16 ft. These three office rooms are kept warm with a hot air furnace in a half basement. The frame structure is covered with Master panels, simulating brick, and is roofed with asbestos shingles.

Among the attractive features of construction are bumper guards before the outside supporting pillars of the roof over the scale deck. Reflecting red signal insets in these guards give protective warning to truck drivers at night.

A scale desk has been built around the supporting stand for the beam of the 15 ton truck scale. This desk provides a broad area on which necessary receiving sheets, reduction tables and calculators may be scattered within reach. A drawer is incorporated in this Masonite covered desk.

Both a high desk and a long standard height table are advantageously placed for ease in record keeping. Manager Hauert uses a roll top desk at the front end of the long table, where he is first on hand to greet the customers coming in, and only a step from the scale beam.

Lighting is done with fluorescent tubes, one set of five over the scale beam; another set of five over the bookkeeper's desk.

Floors are of maple, finish of the walls and ceiling is tinted plaster, trim is varnished pine.

The Peotone Farmers Elevator Ass'n operates a 40,000 bu. cribbed elevator on the Illinois Central railroad at Peotone, has an extensive custom grinding and retail feed trade, and carries lumber and coal as its most important side lines.



Top: New office of Peotone (Ill.) Farmers Elevator Ass'n. Bottom left: Concrete abutment protects pillars of scale deck cover. Bottom right: Manager Louis H. Hauert, at desk built around scale beam.

Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome.

Enid, Okla.—The average precipitation for Oklahoma during November, 1942, was 1.51 inches, which is .54 inch less than the 51-year average.—Enid Board of Trade.

Dieterich, Ill., Dec. 21.—The soybean crop was the largest ever raised in this territory and most of it has been marketed. We have yellows, Morse and Virginias.—Wright Seed & Grain Co.

Decatur, Ill., Dec. 19.—The covering of snow prevents harvesting of the soybean acreage, which is rather large in some sections. There will be considerable loss in the yield as well as deterioration in quality in these beans.—Baldwin Elevator Co.

Dodge City, Kan., Dec. 17.—Reports from the wheat roots continue to come in ultra-favorable. While most of the Kansas crop has gone into the dormant stage as a result of freezing temperatures, for the most part the state has been blanketed with two or three good snows which were evenly spread over the fields providing protection as well as adequate moisture.—J. F. Moyer, sec'y, Kansas Grain, Feed & Seed Dealers Ass'n.

Albany, Ore.—Jack Smith, seed grower near Albany, Ore., reports a heavy yield of mustard seed from his sixty acres. Considerable of the curly leaf mustard seed has been ordered by seed companies for '43. Final tabulation of Austrian winter pea seed yields in Union County (Ore.) this year shows an average production per acre of 935 lbs. of clean seed on approximately 16,000 acres harvested. Subterranean clover which has been mentioned frequently as a fast-coming pasture plant, is enjoying the greatest expansion as new pasture legume.—F.K.H.

Minneapolis, Minn., Dec. 16.—Reports from practically all sections of the country indicate an excellent prospect for the winter wheat crop. The seed was planted under ideal conditions and moisture has been sufficient. The crop generally is well rooted, has a good stand and good color, and is in excellent condition to enter the winter months. Some reports from western Kansas state that the heavy growth of volunteer wheat has sapped much of the moisture from the ground. Although rains in this area were frequent, they were not heavy, so the subsoil is drier than expected. Most of the southwest hard winter wheat area, however, is in excellent condition and prospects are bright at present. The same is true of the eastern soft wheat area. Wheat in the Pacific Northwest is well rooted and shows a good stand.—Cargill Crop Bulletin, T. R. Shaw, editor.

Government Crop Report

Washington, D. C.—In its report of Dec. 18 the U.S.D.A. gives production of 1942, with 1941 in parentheses, as follows: buckwheat, 6,687,000 (6,038,000); flaxseed, 40,660,000 (32,285,000); rice, 66,363,000 (51,323,000); grain sorghums, 107,245,000 (111,784,000 bus.); popcorn, 153,275,000 (121,823,000 lbs.); hay, 105,328,000 (94,238,000 tons); dry edible beans, 19,608,000 (18,503,000 bags of 100 lbs.); alfalfa seed, 974,000 (1,049,000); red clover seed, 1,082,000 (1,469,000); alsike clover seed, 256,000 (313,000); sweet clover seed, 725,000 (787,000); lespedeza seed, 179,700,000 (178,700,000 lbs.); timothy seed, 1,624,000 (1,274,000 bus.).

The yield of corn per acre surpassed previous records. In 1942 the yield was 35.5 bus., against 31.1 in 1941 and an average for 1930-39 of 23.5 bus.

The Office of Price Administration has thrust itself into regulation of rates for transportation in opposing an increase to 15c from 10c in the bus fare between Seat Pleasant, Md., and Washington, D. C. In this it has been upheld by the Court of Appeals sustaining the OPA petition for an injunction. The president of the bus line says he will appeal to the Supreme Court of the United States.

The 1942 Crop Flaxseed

Minneapolis, Minn.—The final crop report of the year of the United States Department of Agriculture was released Dec. 18, placing this year's domestic production of flaxseed at 40,660,000 bus., compared with 32,285,000 bus. produced last year and 30,886,000 the previous year. The average yield this year was 9.2 bushels per acre on an acreage of 4,402,000 harvested this year, as compared with 9.9 average yield on 3,275,000 acres in 1941 and 9.7 average yield on 3,130,000 acres in 1940. Of this total, Minnesota produced 15,950,000 bus. with an average yield of 10.0 per acre. Incidentally, this year's huge production of soybeans was estimated at 209,559,000 bus., compared with 105,587,000 bus. produced last year.—Archer-Daniels-Midland Co. Leonard — (5) 12-22 15m 6pt

Winter Wheat Planting Under Last Year

The Department of Agriculture Dec. 21 estimated that 37,482,000 acres had been planted to winter wheat for the 1943 crop and probably would produce 624,504,000 bus.

The acreage is 2 per cent less than the total of 38,339,000 a year ago and the production forecast is 11 per cent less than the total 1942 crop of 703,253,000 bus.

Growing conditions were reported favorable in most sections although there was too much rain in Pennsylvania and a deficiency in Illinois, Washington and Oregon.

The indicated yield was estimated at 16.7 bus. an acre, or less than last year's 18.3 bus., but above the average of 11.8 bus.

Buying of cash wheat by the Federal Crop Insurance Corporation to cover premiums paid by farmers for insurance on 1943 crop is said to be tightening the wheat market, at a time when the C.C.C., another government agency, is trying to sell good wheat for feed.

World Wheat Situation

Large world crops and restricted trade resulted in the largest world wheat supplies on record in the period 1938-42. The blockade and other war conditions reduced world exports of wheat and flour to 465 million bushels in 1940-41 compared with 638 million bushels in 1938-39 and 625 million bushels in 1939-40. Net exports from the United States in 1940-41 were down to 30 million bushels, compared with 106 million bushels in 1938-39 and 45 million bushels in 1939-40. Both world and United States exports continued small in 1941-42.

Present indications are that the 1942 world crop, exclusive of the U.S.S.R. and China, may be about 230 million bushels above the 3,980 million bushels estimated for 1941, and about 300 million bushels above the 1931-40 average of 3,915, million bushels.

The greatest change in world production this year as compared to last year is in the Canadian crop. A crop of 608 million bushels was indicated November 13, which is 296 million bushels above the revised estimate of 312 million bushels in 1941. The yield in Canada this year is a record, but the acreage is the lowest since 1925.

The crop indicated for the United States at 984 million bushels is 38 million bushels above last year. Production in Europe, estimated on the basis of limited information, is now indicated to be about 40 million bushels less than the below-average outturn in 1941, estimated at 1,420 million bushels.

Production in both Argentina and Australia may be somewhat less than last year.—U.S.D.A.

United States Grain Crops for 57 Years

Estimates of the U. S. Department of Agriculture of wheat, corn, oats, rye, barley and soybean crops of the United States from 1886 to 1942, in bushels, are as follows, three ciphers omitted:

	Winter	Wheat Spring	All	Corn, All	Oats	Rye	Barley	Soybeans
1886.....			513,540	1,782,767	682,312	23,854	73,502	
1887.....			490,761	1,604,649	696,175	22,548	72,395	
1888.....			423,867	2,250,632	773,139	28,417	75,930	
1889.....			504,370	2,294,289	831,047	29,524	80,790	
1890.....			449,042	1,650,446	609,122	26,378	69,880	
1891.....			677,543	2,335,804	836,789	29,541	94,160	
1892.....			611,854	1,897,412	721,824	28,713	96,170	
1893.....			505,795	1,900,401	707,129	26,700	87,109	
1894.....			541,873	1,615,016	750,009	26,758	74,211	
1895.....			542,119	2,534,762	924,858	29,636	104,476	
1896.....			522,963	2,671,048	774,929	31,858	97,479	
1897.....			606,202	2,287,628	829,525	31,137	102,575	
1898.....			768,148	2,357,323	842,205	29,062	98,174	
1899.....			655,143	2,645,796	937,173	26,001	118,161	
1900.....			599,315	2,661,978	945,483	27,413	96,588	
1901.....			762,546	1,715,752	799,812	30,773	123,800	
1902.....			686,959	2,773,954	1,076,899	33,877	146,207	
1903.....			663,115	2,515,093	885,469	28,932	149,335	
1904.....			555,571	2,686,624	1,011,566	28,461	186,103	
1905.....			706,026	2,954,148	1,104,395	31,173	171,639	
1906.....			740,509	3,032,910	1,022,715	29,609	179,148	
1907.....			628,764	2,613,797	801,144	28,247	150,534	
1908.....			642,818	2,566,742	829,368	28,650	170,780	
1909.....		266,131	683,927	2,611,157	1,013,909	30,083	173,069	
1910.....	429,875	195,601	625,476	2,852,794	1,106,162	29,098	142,419	
1911.....	428,740	189,426	618,166	2,474,635	885,527	31,398	145,074	
1912.....	402,703	327,308	730,011	2,947,842	1,353,273	37,911	196,927	
1913.....	501,239	249,862	751,101	2,272,540	1,039,131	40,390	158,820	
1914.....	670,945	226,542	897,487	2,523,750	1,066,328	42,120	177,712	
1915.....	640,565	368,072	1,008,637	2,829,044	1,435,270	46,751	206,976	
1916.....	456,118	178,454	634,572	2,425,206	1,138,969	43,089	159,157	
1917.....	389,956	229,834	619,790	2,908,242	1,442,519	60,321	182,209	
1918.....	556,506	347,624	904,130	2,441,249	1,428,611	83,421	225,047	
1919.....	748,460	230,637	979,097	2,678,541	1,106,603	78,659	208,877	
1920.....	613,227	230,050	843,277	3,070,204	1,444,291	61,915	171,042	
1921.....	602,723	216,171	818,894	2,328,442	1,045,270	61,023	132,702	
1922.....	571,459	275,190	846,649	2,707,306	1,147,905	100,986	152,908	
1923.....	555,299	204,183	759,482	2,875,292	1,227,184	55,961	158,994	
1924.....	571,558	268,533	840,091	2,298,071	1,424,422	59,076	167,314	4,947
1925.....	401,116	268,026	669,142	2,853,083	1,410,336	42,779	192,779	4,875
1926.....	631,950	201,594	833,544	2,574,511	1,141,941	35,361	164,467	5,239
1927.....	547,666	327,067	874,733	2,677,671	1,093,097	52,111	240,057	6,938
1928.....	577,417	335,544	912,961	2,714,535	1,318,977	38,591	329,625	7,880
1929.....	586,055	236,125	822,180	2,535,546	1,118,414	35,482	280,242	9,398
1930.....	631,205	258,497	889,702	2,065,273	1,277,379	46,276	308,752	13,471
1931.....	817,962	114,259	932,221	2,588,509	1,296,913	32,280	398,543	16,733
1932.....	478,291	267,487	745,778	2,908,878	1,246,548	40,639	302,042	14,975
1933.....	350,792	178,183	528,975	2,351,658	791,500	21,150	155,825	13,147
1934.....	405,562	91,377	496,939	1,377,126	525,889	16,045	118,348	23,095
1935.....	465,319	161,025	626,344	2,296,669	1,194,902	58,597	285,774	44,378
1936.....	519,013	107,448	626,461	1,524,317	789,100	25,554	147,452	29,983
1937.....	685,102	188,891	873,993	2,644,995	1,146,258	49,449	219,635	45,272
1938.....	686,637	244,164	930,801	2,642,238	1,053,839	55,039	252,199	62,729
1939.....	563,431	191,540	754,971	2,619,137	937,215	39,249	276,298	87,409
1940.....	589,151	227,547	816,698	2,449,200	1,235,628	40,601	309,235	77,874
1941.....	671,293	274,644	945,937	2,672,541	1,176,107	45,191	358,709	106,712
1942.....	703,253	278,074	981,327	3,175,154	1,358,730	57,341	426,150	209,559

[illegible]

Soybeans Enter C.C.C. Bins in Indiana

Struggling with their largest soybean crop in history, Indiana elevators are cooperating with A.A.A. agencies to store excess soybeans.

At most points thru Indiana's soybean belt the county A.A.A. com'ites have been erecting prefabricated wood bins, and buying soybeans for the account of Commodity Credit Corp., for storage in these bins. Elevator operators, their own bins creaking under a load of beans for which they are unable to get sufficient shipping permits within C.C.C. Area 2, have been aiding in the bin filling job.

A.A.A. com'ites pay the elevators in most cases 2c per bu. for grading, and weighing the beans received and putting them in the bins. The county com'ites pay for erection of the bins, and furnish the equipment for filling them. The elevators maintain records of receipts, and furnish the power and labor for filling the bins.

The job of filling the bins moves slowly. It is difficult to get sufficient labor. But the farmers show a preference for disposing of their beans in this way rather than attempt to keep them in inadequate storage facilities on the farm.

"I suppose it is not peculiar," says Mr. John W. Gladden, manager of the Standard Elevator Co., at Pine Village, Ind., who is handling the job of filling 20 A.A.A. bins with soybeans for the Warren County A.A.A. com'ite, "but when we were buying beans and putting them into our elevator, farmers complained that we were grading them too rigidly. After we ran out of storage space in the elevator and started filling A.A.A. bins they complained that we did not grade the beans rigidly enough."

Even with a long list of lumber companies producing prefabricated wood bins, demand has far exceeded the supply, and forced county A.A.A. com'ites to seek other forms of cover for Indiana soybeans.

County com'ites have rented empty high school gymnasiums, empty garages, and vacant warehouse buildings. Beans have been stored in abandoned freight depots and station houses. Elevator operators have cooperated in these enterprises to protect the interests of their customers, as country elevator operators in Kansas, and Oklahoma, and Texas did during the overflow of wheat from the combines.

An example is a freight warehouse at Peru, Ind., formerly operated by the Wabash Valley Express Co., a trucking firm that sold its trade to a competitor. David Jackley, manager of the Peru Grain & Coal Co. located it for the Miami County A.A.A. com'ite, after 10 prefabricated bins had been filled with 15,000 bus. of beans, and the com'ite found there were more beans to come.

The empty brick warehouse building was rented from Glen Shively, its owner, for somewhere around 1/4c per bu. per month. Tar paper was spread over its concrete floor. Then the Peru Grain & Coal Co. was hired at 1 1/2c per bu. to grade, weigh, and pay for the beans delivered for the account of C.C.C. The beans were scooped out of the delivering trucks onto the tar paper covered floor to a depth of five or six feet, and 10,000 bus. of soybeans moved into the warehouse before deliveries ceased.

"Everything considered," said David Jackley, "I didn't make a dime from the deal. But I succeeded in satisfying the farmers, most of whom trade with me. The same goes for the job of filling the 10 wooden bins. We were allowed 1 1/2c per bu. on that job, but we had to furnish the power and the labor."

The story of dumping beans on the flat floor of an abandoned freight warehouse at Peru has its counterpart in many other Indiana communities. At New Haven an estimated

15,000 bus. of beans were scooped out on a tar paper covered concrete floor in the abandoned brick depot and station house of the old Ft. Wayne-Lima interurban line after eight prefabricated wood bins had been filled with 22,500 bus. and could hold no more. The New Haven-Thurman Equity Exchange sampled and weighed the beans and kept the records at 1c per bu., while the labor was performed by the county com'ite, according to Arthur Goeglein, the company's manager.

Walter Einspahr, of the Gleaners & Farmers Co-operative Elevator at North Hayden, Ind., took a long step to help the Lake County farmers. He leased the buildings of the Lake County fair grounds at Crown Point, put beans in the Industrial Building, the Fine Arts Building, and the Poultry Building, which were estimated to have room for 50,000 bus. Mr. Einspahr's company followed the plan used by elevators in the Southwest for wheat last sum-

mer. It handled the entire project, leased the buildings in its own name, carries the insurance, gets the usual margins and a storage charge for the beans, on which it has issued regular warehouse receipts.

Kiefer Feed & Supply Co. at Elwood, and the Simpson Grain Co. at Simpson followed the same plan. The former leased a section of the Armory at Elwood, also the former Buick garage, and a warehouse of the Fetting Canning Corp. to get room to carry more than 100,000 bus. of soybeans.

Simpson Grain Co. filled the barn and the corn cribs on the farm of George Pasko, one of the owners, and leased the 40 x 125 ft. warehouse of the Kelley Island Lime & Transport Co. north of Huntington, to hold another 30,000 bus. or more of beans.

Such enterprising storage projects have not been possible for all members of the Indiana trade. Richard D. Cart, who runs the C. F. Cripe elevator at New Waverly, Ind., says: "I would give the Cass County A.A.A. com'ite the land on which to erect bins free of rental, if it would only put up bins. I was promised bins several weeks ago. I arranged for reasonable labor to erect them. But the bins have not come, and our farmers are thoroly dissatisfied. Many with no room on their farms in which



Top: Russell Wilson of Wilson Coal & Grain Co., demonstrates how to use a trier on a load of soybeans at Rochester, Ind. Bottom: Filling C.C.C. prefabricated bins at Columbia City, Ind., with C.C.C. soybeans by the scoop method. [See pages 515 and 516.]

Commodity Markets and the Exchanges

By RICHARD UHLMANN, chairman Chicago Board of Trade Committee on Public Relations and Education, before Western Grain and Feed Ass'n.

[Continued from page 477 of Dec. 9 number]

to store them, have left the beans in the field unharvested.

"I quit buying soybeans 2½ days after the harvest started, when I found my elevator space already overloaded, and no shipping permits to be had."

Mr. Cart operates a small elevator, one of the old type that predominated in the days of 40,000 pound capacity cars. Its bins were designed to hold what was then a large carload of grain, 1,200 bus.

"All but two bins are filled with beans," complains Mr. Cart. "One of these two bins is filled with old corn, the other with new corn. The railroad will furnish only large capacity cars which I cannot fill with corn under new O.D.T. rulings. This leaves the elevator tied up except for a little retail trade unless I can get rid of some beans."

"You can see why I would be grateful for a permit or two; or for wooden bins that would hold part of the load and furnish space for the farmers who ask me daily to take care of their beans."

Indiana soybean processors accept beans delivered by truck. But this is no solace for the elevator operators struggling with local crops. C.C.C. contracts with processors give no financial consideration to the truck movement of beans from elevators. The price for soybeans to a country elevator operator is \$1.64¼c per bu., basis No. 2, delivered by truck to the processor, or loaded in a car on track at the elevator. Since the trucking charge would quickly eat up all margin, elevator operators have made little effort to move beans by truck, even where they have been able to get truck unloading permits. We have heard of but one case, wherein the elevator was sending its truck empty to the processor to pick up soybean meal, and managed to move some beans from the elevator by carrying beans free as ballast.

All of the nation's 143,000 tank cars will be assigned to specific services under the O.D.T. order effective Dec. 12. Certain tank cars will be assigned to the eastern petroleum service. Delivery of oil to the east is to be stepped up from the present 750,000 barrels daily to 900,000 barrels. Carriers are ordered to disregard shippers' instructions for the movement of petroleum tank cars.

Mills to Granulate Wheat for Government Distillers

For the maximum yield of alcohol from wheat the flour therefrom must be coarsely granulated. The granules are best shipped in bulk carloads to the distillers, who will handle the stock by spouting.

CCC will sell mills on the Missouri river and east of the river and of the Minnesota line, wheat from its stocks at 84 and 82 cents a bu. depending on whether final delivery is to eastern or middlewestern distilleries. Mills west of the Missouri and of the Minnesota line, including those in Kansas, Montana and further west, must buy wheat from the agency on a negotiated basis.

Wheat purchased from the agency will be processed by the mills and the grits sold to distillers for a flat rate in all sections of \$32.14 a ton, CCC paying the freight from origin to still. Mills retain the offal, amounting to about 40% of the grain, for use in millfeeds which will be sold under ceiling prices.

Out of the approximate stocks of 750,000,000 bus. of wheat under government control by loan about 260,000,000 bus. are estimated by Wm. McArthur, director of the grain division of the C.C.C., to be available for the distillation program. It is believed, however, that during the first quarter of 1943 only 10,000,000 bus. will be taken by the mills.

The millers have agreed to the arrangement. The C.C.C. continues the sale of whole wheat and corn direct to distillers for the production of industrial alcohol.

I remember very distinctly when the first World War began in 1914. The commercial and financial shock was so terrific that all the world's stock exchanges closed their doors. The directors of the Chicago Board of Trade paused for a moment and considered closing the Board, but decided against it. So we have a record of being open continuously, without a break, on practically every business day since our incorporation.

BAD EFFECT OF RESTRICTION OF EXCHANGES—Let us assume, for instance, that many of the present-day hindrances to the flotation of securities had been in effect at the time the Frenchman, Ferdinand de Lesseps, one of the greatest men of his age, contemplated the building of the Suez and Panama Canals. Of necessity, he became a promoter and speculator, altho his aim was not personal gain but the fulfillment of his vision to create enterprises beneficial to the whole world. The building of the Suez Canal, which required the issuance of a large amount of securities, proved a great success. The investors (or as our legislators would term them, "speculators," because great risks attended it) realized good profits from their venture; in fact, the British Government, when Disraeli was premier, conceived the idea of buying Suez Canal shares in the speculative markets of London and Paris until a majority interest had been acquired, which led eventually

to the British occupation of Egypt. This is one speculation which was applauded by the whole world, but which could not have taken place had had there been in force great restriction of speculation.

The Panama Canal was a failure financially, but notwithstanding that many French investors lost a great deal of money, and were greatly disappointed thereby, its completion finally by the United States government connected two great oceans of the world for transportation by a shorter route, and no one would now wish undone the great good which it has accomplished in this way.

I often think what a pity it is that our legislators are not more familiar with the functions of the central marketing systems. I feel that if they were, they would be more sympathetic with our problems, and could cooperate better toward a proper understanding of the farmer's requirements.

PLANNED ECONOMY DIFFICULT—With world conditions changing so rapidly any planned economy becomes extremely difficult. It was only a few years ago that crops were plowed under, and little pigs were slaughtered. Today we have a war and it is difficult to obtain enough livestock and pork products to take care of ourselves and our allies.

Successively higher loans which have been granted to producers have prevented the normal



Above: Abandoned interurban line station (last used as filling station) at New Haven, Ind., filled with C.C.C. soybeans. Below: Freight warehouse at Peru, Ind., filled five feet deep with C.C.C. purchased soybeans. [See pages 514 and 516.]

exportation of wheat, and for the first 20 weeks of the present season, we have only shipped about 7 million bushels. During a slightly shorter period, Canada has cleared about seven times as much. This simply means that wheat accumulations will continue to pile up, and by next July we may have a carryover of 800 million bu., or more, which is four times the normal.

In spite of this, our government is worried over the possibility of inflation, and flour ceilings have been adopted. To those who have devoted their life's efforts to the marketing of the farmers' products, the fear of inflation, as far as grains are concerned, seems difficult to comprehend. In ordinary terms, inflation occurs when the demand for goods is greater than the supply. Certainly this does not hold true in grains, and whatever advances have occurred have been in most part due to the increase in loans.

On Sept. 5, 1939, which was the first trading session after England declared war against Germany, December wheat closed at 81½¢; the loan price offered by the C.C.C. to the farmer was 80¢ a bushel, basis Chicago. At present December wheat is selling at about \$1.26; with the loan price for the 1942 wheat at about \$1.32 basis Chicago. Thus, it can be seen how closely the loan and the market run parallel, but all at the expense of losing our export markets for wheat.

USE FOR ALL FEEDS—Turning for a moment to the feed-grain situation, which is more important to you people in Iowa, the enormous feeding program fostered by the Government may find a use for all the corn, oats and other feeds that have been raised, despite the fact that Nature has been overly generous. This is especially true, since federal authorities have embarked upon a program designed to support hog prices at an average of \$13.25 per hundred pounds, basis Chicago, until Sept. 30, 1944.

Even with this ambitious consumptive outlet, there is not likely to be any shortage, owing to the fact that Canada has also harvested tremendous crops, which in case of a domestic deficiency might be imported.

The Government at Ottawa asked farmers to reduce their acreage of wheat and to increase the acreage of flax and coarse grains. All this was done, but the one item that nobody could foresee in these calculations, was that Canada would receive the heaviest rainfall ever recorded over the Prairie Provinces, bringing with it record yields per acre, and crops which were far in excess of any immediate demand.

Secretary Wickard made the following statement on Nov. 22 of this year: "Our good neighbor, Canada, has huge stocks of grains also. She has more than half a billion bushels of wheat that she won't be able to market this year. In addition, she has around 300 million bushels of feed grains which we can draw upon as soon as it is practical." This announcement caused hesitancy in speculative circles for a time, and naturally the trade is confused by the many utterances coming from Washington.

For weeks details of the corn loan were awaited, and during the interim both industries and traders, operated with great caution. Finally prices for various counties were announced, but even then, there were some disappointments. During the past twelve months, parity prices have risen about 10¢ per bushel, but loans were only advanced by about 4 to 6¢ a bushel, and I believe that this was done in order to keep the wheat feeding program operative. A close observation will disclose the fact that the loan price now being offered to farmers for their corn will coincide in many cases with the price at which the Government is offering feed wheat for sale. It is probably not accidental that it is working out that way. Taking the country as a whole, the loan is very likely based on an average of 85 per cent of parity, altho the method of computation is different from the one resorted to last year.

THE WHOLE TROUBLE is that there are always surprises, and the industries cannot plan ahead because of the never-ceasing uncertainties. It is hardly necessary to say that I have tried to make this report fair and candid. Speculation in grain and futures trading on the organized exchanges are fundamental market problems which interest every citizen. Right now, we stand at the cross-roads, but it is my belief that despite all the handicaps, we shall survive. Every loyal American realizes that certain sacrifices must be made for our war economy, and everyone wants to do his share to insure victory. If it is necessary for manufacturing plants to close during hostilities, I can visualize that their operations may be resumed following peace. However, it is different with futures markets, as they represent a complicated and intricate piece of machinery, reaching and affecting almost every hamlet in the farming sections of the United States. If our institution were once disbanded, it might take years, if ever, to reorganize it. In that case, both farmers and consumers would be the losers.

Deliveries of Food to Allies

The Department of Agriculture has increased deliveries of foodstuffs for the allied nations in October by 93 million pounds over the preceding month, laying down at shipside some 645,000,000 pounds.

As new shipping and supply lines have opened, the flow of American foodstuffs to seaports for allied destinations has swelled proportionately. The Agricultural Marketing Administration delivery report shows increased deliveries of eggs, dairy products, meats, grains, and other products.

Since Apr. 29, 1941, thru October, 1942, deliveries have included, in pounds weight: Barley, 4,446,120; Corn, 976,130,848; Corn grits, 504,000; dextrose, 1,571; Flour-wheat (white), 145,717,364; Macaroni, 70,000; Malt, 21,451; Mill run, 178,600; Oat meal, 49,958,158; Rye flour, \$6,934,382; Rice, 291,800; Semolina and buckwheat meal, 3,055,800; Starch, corn, 305,325,642; Wheat, 95,234,400; Wheat, cracked, 1,120,300.



Top: C.C.C. wood and steel bins being filled with C.C.C. soybeans at Pine Village, Ind. Standard Elevator Co. (in background) weighed them and kept records. Bottom: Four of the prefabricated bins filled with C.C.C. soybeans at New Haven, Ind., where New Haven-Thurman Equity Exchange did the weighing. [See pages 514 and 515]

From Abroad

Portugal recently purchased 650,000 bus. of Canadian oats.

Ireland recently purchased 390,000 bus. of oats from Canada.

Argentina will levy an export tax of 15c per bushel on corn.

Northern Africa annually exported about 20,000,000 bus. of wheat to France.

Peruvian wheat production in 1942 was slightly above the 100,000 metric tons produced in 1941. Imports in 1941 were 128,760 metric tons.

Finland is offering a bounty of about 1c per pound on the production of grains that is in excess of a fixed average, the purpose being to stimulate production.

Argentina on Dec. 11 issued its first official government estimate of flaxseed production. This year's crop is placed at 62,992,000 bus., against 66,929,000 bus. in 1942.

The Argentine Government has just announced that the prices to be paid to farmers for their 1943 flaxseed production is the same as this year, namely, 69% cents per bushel, delivered Buenos Aires.—Archer-Daniels-Midland Co.

The Balkan countries which usually furnished a substantial surplus of grain for Belgium, Holland, Germany, Italy and other countries have little to spare this season. The war has depleted farm help and there is less incentive to produce surpluses over and above individual needs.

Australia's 1942-43 wheat crop is estimated at 145,000,000 bus. from 10,973,000 acres, compared with 170,000,000 bus. from 12,000,000 acres in 1941-42. The reasons for this decrease are the compulsory restriction of acreage in Western Australia and a shortage of labor and of superphosphate.

No cereals will be available in Scotland during the coming season for either grain- or malt-whisky distilling. The malt distilleries, which are mainly in the Scottish Highlands, will be affected by the ruling, having previously been allowed 33 per cent of their pre-war consumption, which permitted them to keep on working.

The transportation tax of 4c per short ton on COAL can be passed on to buyers, according to the O.P.A.

Moderate Flour Ceiling Rise Rejected

The senate agricultural committee has rejected the proposal of Jas. F. Byrnes, economic stabilization director, for a 58c rise in the flour ceiling, because it was coupled with authority to sell 150,000,000 bus. of C.C.C. wheat below parity.

Mr. Byrnes' proposal, Dec. 14, was as follows:

"In order to induce the farmer whose wheat is under the loan to sell at this time, the department of agriculture announced a program of paying to the farmer a subsidy of several cents a bu. and having CCC cancel the amount due for storage and insurance.

"As an alternative, I (Byrnes) propose to increase the price of flour 58c per bbl. This increase would be made possible by certain economies in the trade. The increased price of flour rolled back to the farmer would mean an immediate increase of from 6c to 10c per bu. for wheat.

"Because such an increase would probably result in farmers believing that the market would continue to rise and wheat would be withheld from the market, it is proposed that Commodity Credit Corporation be authorized to sell not more than 150 million bus. of wheat at the price that would result from the increase in the flour price of 58c per bbl., but in any event, not less than the market price the day of approval of the act. The authority could be limited to one year. It should be given with a proviso that it should not become effective until, and will continue only so long as, the O.P.A. maintains flour prices at 58c per bbl. above present price levels."

On the news of Mr. Byrnes' proposal the price of cash and future wheat made new high records on the crop Dec. 15 under mill buying.

To Cancel Insurance of Careless Operators

We are hearing that some insurance companies are threatening to cancel their policies covering grain elevators unless more strict precautions are observed by their owners and operators, writes Don M. Gemberling, sec'y of the Pacific Northwest Grain Dealers Ass'n.

"There have been much greater numbers of conflagrations in the grain warehouses during the past year. The increased values and impossibility of replacements should make operators apprehensive of such losses; but it seems that some elevators continue to be neglected.

"One of the greatest hazards, and also the most common, is the accumulation of dust and chaff in places where friction, electric sparks, overheated motors, etc., are apt to start a fire. Check your plant over often to make sure such conditions are reduced to a minimum."

Utilizes Salvaged Scrap to Reinforce Foundation

Manager Claude L. Buchet of the Pomeroy Grain Growers, Inc., Pomeroy, Wash., does not think it was much of a trick to find reinforcing steel for the foundation of the ass'n's new 200,000 bu. cribbed elevator. But many others have lauded his ingenuity in discovering a source for the necessary reinforcing, and utilizing it efficiently.

Manager Buchet says: "We were short only the steel for the foundation walls. We had opportunity to get a substitute by shipping in scrap iron, and we took advantage of it."

The Pomeroy Grain Growers, Inc., were foresighted in observing that additional storage would be needed when the 1942 crop of wheat was harvested. Long before harvest time, they put in orders for the necessary machinery, sheet iron, nails, and cribbing.

This foresight did splendid duty except for reinforcing steel. "The machinery was purchased from R. R. Howell Co. before priorities," explains Manager Buchet, "but we were unable to get all the reinforcing steel necessary."

The government's drive for scrap iron to keep the steel mills busy saved the day. Garfield county, Wash., has no scrap iron dealers. Manager Buchet said to the farmers: "Bring your scrap iron to us. We will weigh it, and load it, and ship it to the steel mills and help you do your patriotic duty in this salvage drive. All we ask is the right to purchase from the scrap pile such reinforcing steel as will be useful in constructing storage to hold your grain."

The farmers responded with a will. Manager Buchet reports: "We secured enough deformed reinforcing steel to reinforce the pit walls, and used old, second-hand half-inch round rods for most of the balance of the foundation. We salvaged plow beams and laid them in the concrete walls around the corners. We used some I beams salvaged from the swing frames of combine harvesters, iron bed rails, etc. The concrete foundation we built for our elevator has 4 ft. footings and 12 inch walls." On this foundation the ass'n erected a 200,000 bu. elevator of 2x10, 2x8, 2x6, and 2x4 cribbing, finishing the job early enough to provide cover for all the grain raised by its members, and clean up of its scrap pile gave steel mills an additional 312,000 lbs. of scrap iron to turn into war equipment.



Reinforcing Rods Salvaged from Scrap to Build Elevator for Pomeroy (Wash.) Grain Growers, Inc.

Future of Soybean Products as a Feed

By J. W. HAYWARD, director nutritional research, Archer-Daniels-Midland Co., before animal nutrition short course of University of Minnesota.

Soybeans will go down in history as playing an important part in our "all out for victory" program. Their contribution will be fats and oils, soybean oil meal and soy flour and lots of each too.

Usually from 60 to 70% of our annual crop of soybeans is processed for oil and meal. Last year the processing industry produced approximately 2 million tons of soybean oil meal. This is in contrast to 1½ million tons of soybean oil meal for the crop year 1939-40 and 40 thousand tons for the 1929-30 crop year.

It appears now that the total processing for this crop year would be around 130 million bushels which will yield approximately 3,200,000 tons of soybean oil meal. The remainder of the crop of good quality, outside of next year's seed requirements, will possibly be carried over to our next crop year—1943-44. Many fields of soybeans in the north central states were caught by an early frost before they had ripened. These green immature soybeans are of doubtful quality for processing purposes.

Reports indicate that many of the soybeans harvested so far in Minnesota are running extremely high in damage as immature soybeans. This condition is general throughout the north central states and will possibly discourage such extensive plantings of soybeans in these sections next year. The frost this year was unusually early but we doubt that many of the soybeans up north would have matured even if it would have held off for as much as three weeks. In general, the fields of soybeans damaged the greatest by frost were not planted early enough for maturity of varieties used even for a normal growing period. It is evident that only early maturing varieties of soybeans with approved milling characteristics should be planted in our more northern regions when they are to be harvested for grain.

USES OF SOYBEAN PRODUCTS—The processing of milling varieties of soybeans yields three important products; namely, soybean oil, soybean oil meal and soy flour. Customarily about 80 to 85% of our industry's total production of soybean oil finds an outlet in such food products as oleomargarine, vegetable shortening and salad oils. The industrial uses of soybean oil are ordinarily confined to soap making, protective coatings, core oils and several miscellaneous uses. The picture may be radically changed this year due to the war program both here and abroad.

Soybean oil meal is the principal residual portion of the soybean left after extraction of the oil. Out of the total production, about 95% is customarily marketed for use in feeds for livestock and poultry. About 3% or better has been finding an outlet as a fertilizer and the remainder has been utilized in the form of special processed meals and flours for edible and industrial purposes.

Soy flour for edible purposes is rapidly becoming an important item. Last year the industry produced about 60 million pounds, of which a large amount was shipped to Great Britain under Lend-Lease. Soy flour is now incorporated in a few foods for our armed forces and is showing considerable promise for extensive domestic use to relieve our protein shortage due to the demand for a greater amount of meat, milk and eggs than we are likely to produce. In the manufacture of soy flour, selected soybeans of the milling varieties are used. They are dehulled, debittered and a large part of the oil may or may not be removed. These processed beans are further milled and either ground into a fine flour or made into grits or flakes. The soy flour processors of the industry are planning on producing about a half billion pounds or 250 thousand tons of soy flour this crop year—1942-43. Eight years ago this would have made quite a dent in our soybean oil meal production. In fact, we wouldn't have had any meal as the industry only produced about 222 thousand tons of soybean oil meal for the crop year—1934-35. However, this year even at the rate of soy flour production as indicated, it will only amount to about 8% of our expected tonnage of soybean oil meal.

SOYBEAN OIL MEAL MUST BE PROPERLY COOKED—Three different methods of processing have been employed for some time in the manufacture of soybean oil meal. They are hydraulic, expeller and extraction methods. The hydraulic method has become obsolete for all practical purposes; therefore, I will omit further reference to it. The expeller method of oil extraction produces what is commonly known to the trade as 41% or 43% protein (expeller type) soybean oil meal. Soybean oil meal manufactured by the solvent extraction process is commonly known as 44% protein soybean oil meal. It has been adequately demonstrated in numerous experiments and practical feeding tests that soybean oil meal must be properly cooked during its manufacture to render its protein satisfactory for critical animals or animals having exacting requirements for protein, such as hogs, lambs, calves, dogs,

foxes, chickens, ducks and turkeys. In other words, raw uncooked soybeans and improperly cooked soybean oil meal are deficient in protein quality for these critical animals. This deficiency is due to the unavailability of methionine, an essential amino acid and constituent of soybean protein, in the raw or improperly cooked soybean products.

Another sulphur containing amino acid, cystine, is also locked up or unavailable to critical animals as it exists in the uncooked soybean product. Cystine per se is not strictly speaking essential to these critical animals but in actuality it amounts to about the same thing because of its sparing action toward methionine. By cooking soybean oil meal during its manufacture, the amino acids, methionine and cystine, are released so that they can be utilized by animals and poultry for growth and to perform the remaining functions of protein. If you desire to pursue this subject further, I recommend an excellent and very recent article entitled "Soybean Protein as a Source of Amino Acids for the Chick," by Dr. Almquist and associates, Division of Poultry Husbandry, University of California, Berkeley. This article appears on page 385 of the October 10, 1942 issue of the Journal of Nutrition.

Composition of Soybeans and Soybean Oil Meal

	Soybeans Midwest Milling Varieties	41 and 43% Expeller SBOM	44% Extracted SBOM
Protein %	34.0-38.0	42.0-44.0	44.0-47.0
Fat %	18.0-21.0	3.5- 5.5	0.5- 1.2
Fiber %	4.0- 5.0	5.0- 6.0	5.0- 6.0
N.P.E. %	26.0-27.0	31.5-32.5	32.0-33.0
Ash %	4.5- 5.0	5.5- 6.0	5.5- 6.0
Calcium %	0.25-0.28	0.28-0.31	0.30-0.33
Phosphorus %	0.58-0.60	0.60-0.63	0.62-0.65
Phosphatides %	2.0- 2.5	2.0- 2.5	2.0- 2.5
Choline, mgs./ 100 gms.	225	225	225
Vitamin A, I.U./ 100 gms. as carotene	140	90-115	70-80
Vitamin B, I.U./ 100 gms.	200-400	0-70	70-200
Riboflavin, mcgs./ 100 gms.	300-500	300-500	300-500
Niacin, mgs./ 100 gms.	4.9	5.7	6.0
Biotin, mcgs./ 100 gms.	60	70	73
Pantothenic acid, mgs./100 gms.	0.6-1.4	0.8-2.0	0.8-2.0

AMINO ACIDS AND PROTEIN QUALITY—It is appreciated that protein quality or the ability of a protein to produce growth and perform the various functions of protein is dependent upon its content of the essential amino acids. The following table presents for comparison the amino acids contained in milk casein and soybean glycinin. The significance of the milk casein is that it constitutes about 85% of the total protein in milk which is credited as being one of our very best sources of high quality protein. Soybean glycinin is the principal protein in

Scale Ticket for Soybeans

Ben Levy, of Ben Levy Grain Co., who operates grain elevators at New Haven, Ossian, and Tillman, Ind., uses a special numbered scale ticket to record receipt of soybeans.

The scale ticket incorporates all of the information about the grade which is mandatory in determining the price to be paid for soybeans under the C.C.C. buying order.

It includes the C.C.C. recommended declaration by the producer that he was paid the U.S.D.A. announced support price of \$1.60 basis No. 2 beans, for the beans covered by the scale ticket.

The ticket is reproduced herewith. Ben Levy complains about it a little bit. He says the space for deduction of dockage and foreign material should be placed under the net pounds, so that this deduction can be readily subtracted from the net weight. "Dockage and foreign material," he says, "is a weight deduction, not a price deduction," and he is right.

BEN LEVY GRAIN CO.

New Haven, Ossian, Tillman, Ind., 194 N^o 900

From _____
Kind of Vehicle _____ License No. _____
Name of Driver _____
Name of Producer _____
I, _____ of _____
do hereby certify to Ben Levy Grain Co. to whom I have this day sold and delivered _____ bushel of _____ Soybeans, that said Soybeans were owned free and clear of any liens by me, and that Ben Levy Grain Co. paid me \$1.60 per bushel basis for No. 2 Soybeans for same, which was the support price as announced by the U. S. Department of Agriculture in effect at time of sale by me.

Signed _____
Witness _____

Moisture %	_____	GROSS	_____
Dmg. - %	_____	TARE	_____
Splits - %	_____	NET	_____
F. M. - %	_____	Less Dock and F. M.	_____
Dock - %	_____		_____

WEIGHT	POUNDS	PRICE	AMOUNT
Weighed by	_____	_____	_____
Inspected by	_____	_____	_____
Driver (on) (off)	_____	NET AMT.	_____

Ben Levy gets a receipt for all money paid for beans

soybean products. It constitutes from 80 to 90% of the total protein contained in soybeans and soybean oil meal.

Amino Acid	Dietary Importance	Milk Casein per cent	Soybean Glycinin per cent
Glycine	Non-essential	0.4	1.0
Proline	"	7.6	3.8
Spartic acid	"	4.1	9.4
Glutamic acid ..	"	21.8	19.5
Tyrosine	"	6.5	1.9
Cystine	"	0.2	1.1
Valine	Essential	7.9	0.7
Leucine	"	9.7	8.5
Phenylalanine ..	"	3.9	3.9
Arginine	"	3.8	8.1
Histidine	"	2.5	1.4
Lysine	"	7.6	9.1
Tryptophane	"	2.2	1.7
Methionine	"	3.1	1.8

It is for the most part very discouraging to attempt an evaluation of protein quality for various feed ingredients by means of studying the amino acid content of their respective proteins. The principal reason for this is that the information available on amino acids is very limited and usually re-

ported for only a fraction of the total protein.

The most satisfactory and convenient method for evaluating proteins as to quality is by means of actual feeding tests with such critical animals as the white rat used in many laboratories and baby chicks or the like. These feeding tests usually consist of either metabolism studies or growth experiments with the results reported as biological values in the case of metabolism studies and as nutritive values of the proteins for the growth experiments.

In many instances with the growth experiments, some standard product, such as dried skimmilk or casein, is used as a control and the results in growth performance of the experimental proteins are expressed in per cent as relative protein efficiency on the basis of the milk protein valued at 100%.

In our laboratory, we have run numerous protein assays using a standard procedure and white rats as our experimental animal. On an average, we find a properly cooked soybean oil meal to have a relative protein efficiency (basis milk protein at 100%) of 92 to 98%. Other values run as follows: Raw soybeans, 50 to 60%; improperly cooked soybean oil meal, 60 to 75%; a good grade of fish meal (sardine), 90 to 104%, average commercial grades of meat scraps, 50 to 60%.

PROTEIN QUALITY OF INGREDIENTS—The Washington Agricultural Experiment Station in their Bulletin No. 388, published July, 1940, gave considerable information on the subject of protein quality of various feed ingredients. Their values are termed "Gross Value of Protein Supplements for Poultry." For all practical purposes, their values are similar to our relative protein efficiency values. Here are some of the average gross protein values recorded in this bulletin: Herring fish meal, 102; pilchard fish meal, 96; sardine fish meal, 95; 44% soybean oil meal, 84; expeller 41% soybean oil meal, 67; meat meal (50% protein), 55 and dehydrated alfalfa meal, 37. More recently the Washington Agricultural Experiment Station has published additional information on this subject in the U. S. Egg & Poultry magazine, Vol. 48, No. 8, page 466 (August, 1942). Some of the gross protein values reported in this publication are pilchard fish meal, 109; soybean oil meal, 85; meat meal, 33; 25% fish meal and 75% soybean oil meal,

87; 50% fish meal and 50% soybean oil meal, 102; 25% meat meal and 75% soybean oil meal, 60; 50% meat meal and 50% soybean oil meal, 68.

The West Virginia Agricultural Experiment Station has also recently published interesting information on the subject of protein quality for various feed ingredients. Their report is contained in the July issue, 1942, of Poultry Science. They give their values as "average per cent utilization" on certain proteins. Some of the values are as follows: Soybean oil meal, 76%; Menhaden fish meal, 57; meat scraps, 41.9; corn gluten meal, 28.7. They also reported on various combinations of proteins in practical growing rations for poultry. It is interesting to note that soybean oil meal gave them a higher protein utilization value than any other single ingredient used and higher than any combination of ingredients, including soybean oil meal with other sources of protein.

Cornell University has also compared various ingredients for protein quality. This work is reviewed very conveniently by Dr. L. C. Norris in an article entitled "Importance of Good Quality of Protein." The results are quite similar to the ones I have given in the above so I will not repeat them at this time.

Dr. Almquist, of the University of California, has found in several of his experiments using chicks as his experimental animal that a good grade of fish meal, even at rather small levels, will tend to supplement the protein of a well cooked soybean oil meal. His reasons for this supplementation are that even a well cooked soybean oil meal made from available milling varieties of soybeans supplies the amino acid, methionine, at a slightly low level for optimum protein nutrition; whereas, a good grade of sardine fish meal contains more methionine than a well cooked soybean oil meal and this is the reason for the supplementation of a well cooked soybean oil meal by fish meal. In the publication which I have cited in the above, Dr. Almquist indicates that a properly cooked soybean oil meal of commercial grade and from average milling varieties of soybeans contains proteins of excellent quality and adequate in all of the essential amino acids with the exception of the slight deficiency in the

[Concluded on Page 529]

Master Ledger Solves Reference Problem

Kenton Garrison, of The Garrison Grain Co. at Earl Park, Ind., got tired of pouring thru original records to find the information desired by farmers with income taxes to pay, and to supply tax checkers with the information they demanded to justify his tax payments. He sought a solution to this problem, a form of record which would give him a quick answer for the questions posed.

The answer turned out to be a master recapitulation Scale Book, set up in a Grain & Feed Journals Form No. 23. This ledger he divides into sections to cover each grain handled.

Each day Mr. Garrison totals the grain received from each farmer, and makes an entry of this total in the master record. The information shown is the date, the page number of the original grain receiving record, the commodity, the name of the farmer, the number of bushels and pounds delivered, the price, and the total amount. This information is entered consecutively in the section of the ledger devoted to the kind of grain received.

Totals are carried forward from each page. Mr. Garrison can at any time run his totals of grain received, and the total amount of money paid for it.

A similar record is run to cover his shipments. The date of shipment, the shipping ledger page number, the name of the company to which the grain is shipped, the car number and initials, the bushels, the destination state (for interstate and intra-state tax purposes) and the amount of money received. With this record Mr. Garrison can readily run at any time the total of each grain shipped, and the amount of money received for it.

With this recapitulation ledger Mr. Garrison can tell at any time whether he is making money, losing money, how much taxes he must pay, and what any individual farmer has delivered to him.

The total of grain shipped, plus the volume of grain in the elevator, subtracted from the volume of grain received, shows his shrink and facilitates his making weekly reports of stocks on hand for premium adjustment fire insurance.

The total of money paid out for grain, plus the totals of the expense account, subtracted from the total of money received, shows the net profit.

Recording totals each day simplifies reference for Mr. Garrison. He has six years of these recap records in one book, and still has room in the book for several years more.

While these complete records facilitate his helping his farmer patrons to make up their income reports, he is prepared to fill in any reports government inquisitors may demand.



Kenton Garrison, Earl Park, Ind., Using a Master Customers' Ledger.

Grain Carriers

The O.P.A. has asked the I.C.C. to suspend the rate increase asked by the Atlantic States Motor Carrier Conference.

In MC C-303 the Commission holds unreasonably low the contract carrier rates on feed from Kansas City to Wichita and on salt from Lyons, Kan., to Kansas City.

Kansas City, Mo.—Permits for the shipment of wheat to Kansas City for storage are no longer required, the permit system having been abolished at midnight, Dec. 8.

Grain and grain products were loaded into 39,078 cars during the week ended Nov. 28, against 40,902 cars during the like week of 1941, as reported by the Ass'n of American Railroads.

The National Industrial Traffic League at its annual meeting in New York re-elected officers, R. R. Luddecke, president; Clare B. Tefft, vice president, and S. F. Kirby, chairman. The membership has increased from 711 to 813 during the past year.

Illinois Central Railroad Co.'s Supp. No. 27 to Tariff 7679-X, Ill. C. C. No. A-1592, effective Jan. 7, 1943, cancels the following rule, referring to Tariff Ill. C. C. No. A-1603 for rules and charges: "After grain reaches a storage in transit point and the consignor, consignee or owner elects to forward same without unloading for transit privileges, charges will be computed on basis of the rate, plus the transit charge (if any), which would have applied on the grain had storage in transit privileges been accorded."

Traffic League Stands for Private Operation

The National Industrial Traffic League at its recent meeting in New York adopted the following resolution:

The voluminous report of the National Resources and Planning Board, Frederick A. Delano, Chairman, recently transmitted by the President to the Congress, while it contains certain chapters which represent earnest studies by men of high standing, proposes recommendations of revolutionary effect which are predicated on the false assumption that there is something fundamentally unsound and outmoded in the American transportation system, amounting to failure, and reflect the erroneous doctrine that transportation is a medium for accomplishing a social and economic reform amounting, perhaps, to a new order of life.

The implications of the report and the probable results of its recommendations appear to present a serious threat to the cherished principles of private enterprise; and the League will earnestly oppose government ownership or domination as therein contemplated.

Federal Treasury Gets Increased Railroad Income

"All net income benefits of the advances in freight and passenger rates, authorized by the Interstate Commerce Commission early in 1942, have accrued to the federal treasury rather than to the railroads," declared Z. G. Hopkins, representing the Western Railways' Committee on Public Relations, in an address before the Rotary Club Dec. 16. "Increase in railroad gross revenues resulting from these advances in rates," Mr. Hopkins continued, "will in fact amount this year to less than half as much as the increase in the federal income taxes of the railroads on 1942 earnings."

"Railroad performance of freight service this year will amount to about one-third more than in 1941. Amount of passenger transportation is about double that of a year ago. Increase of railroad gross revenues, which makes possible the greater net earnings on which federal income taxes are based, is at least nine-tenths due to performance of greater transportation service, and perhaps one-tenth due to advances in rates."

Washington, D. C.—Denial of petitions filed by the Office of Price Administration and other government agencies for elimination of the increase in railroad rates authorized in 1942 as a result of 1941 wage increases, was asked of the Interstate Commerce Commission by the railroads of the United States in an answer filed Dec. 15. As a result of reductions in rates, together with changes in the traffic, the railroads point out that the revenue they receive for hauling a ton of freight one mile now averages only 0.927 cents, which is less than it was in 1941 and less than in any year since 1918.

Eliminate Waste in Loading Cars

Waste is intolerable in time of war. Waste is expense which the nation and its people can ill afford. This oft repeated axiom applies to our government's innumerable bureaucracies, which are endlessly and honestly criticized for wasteful practices. But while we criticize, and work for less expense in government, let us be very sure our own doorsteps are well swept.

By giving careful thought to the convenient arrangement of shipping bins in their elevators, and to thoroughly mixing before loading cars, country grain shippers can increase the returns from their shipments. If a car is loaded evenly, the shipper can draw a sample, inspect it in the approved manner, and be reasonably sure that his grading will hold out at destination. The car can move from his siding into the channels of commerce, and into consumption with a minimum of time, and expense, and produce the most satisfactory returns.

What happens when a car is loaded unevenly? Even if the shipper samples an unevenly loaded car with an approved trier and makes the five probes laid out in sampling manuals, he has an excellent chance of getting a sample entirely different from the sample that will be taken at the inspection point, because his probe will not be thrust down in exactly the same places that will be reached by the official sampler's probe, and the variations in layers of different qualities of grain in the car will give him different proportions of these qualities. He may get a sample quite different from the sample taken for official inspection. When the grade applied to the grain by the inspector is lower shipper appeals from the grading. This means delay and extra expense for the extra effort. If the car is handled by a commission merchant it means extra effort and extra telephone calls for such merchant. If the inspector's grade is sustained it means an added inspection charge.

There is no guesswork when the car reaches a terminal elevator or an industry for unloading. The receiver checks the car with the sampler. If the car shows uneven loading, and the buyer thinks he can earn a discount by appealing, he raises something of a fuss. The same loss of time and effort starts.

All this waste is eliminated if cars are loaded evenly in the first place. An evenly loaded car means that different samples taken by the shipper, the official sampler, and the buyer will run very close together. If each inspects his sample correctly, according to the rules laid down in the Official Grain Standards, each should arrive at the same grade.

Cars of grain enter commerce when they are loaded by the country shipper. Mistakes at this point cause endless checking and delay. Mistakes corrected here facilitate efficient handling at each succeeding step and expedite movement of grain from producer to consumer. The first step is to load sound well coopered cars and load them evenly.

We are indebted to the Kansas Grain Inspection Department for our illustration of an example of uneven loading.

Heavily Loaded Cars Need Better Coopering

By J. A. SCHMITZ, Weighmaster
Chicago Board of Trade

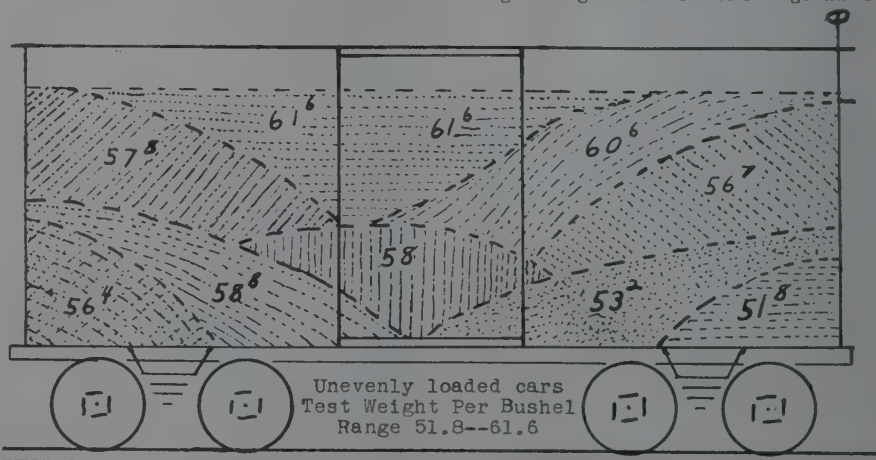
The constant urging by the O.D.T. to have grain cars loaded to their maximum capacity has resulted in many cases of over-loads as testified to by grain samplers who find many cars so highly loaded that it is impossible to secure a fair average sample of the car's contents.

Weighmasters' records too show loads that are in excess of the stenciled load limit of the car.

Now the cooperage of these heavily loaded cars is not always in keeping with the larger loads placed in them. Sometimes it does not meet the requirements of even an ordinary load, yet it should be quite apparent that an increase in the depth of grain in a car increases the lateral pressure on the grain doors and that, therefore, the barricades of heavily loaded cars should receive additional reinforcements. In order to reduce the difficulty in removing them when the cars are unloaded these reinforcements should be applied over the joints of the doors they are reinforcing and they should be fastened (nailed) only along their upper edges.

The barricade, in every case, should be securely fastened to the door post. However, this does not mean that they are to be spiked or over-nailed, for on double thickness doors two 12 penny nails in each end are sufficient to prevent door shifting. The doors should be drawn tight to the door post. (Padding of the door post will insure tight joints.) Furthermore, all crevices between the doors should be made grain tight by either calking or covering them.

Right here it might be well to call attention to the leakage records of the Chicago Board of Trade Weighing Department for the years 1940 and 1941. They show that of the cars recording as leaking, 68% were leaking at or through the grain doors. This large number



of cars arriving at Terminal Markets leaking at the Grain Door clearly indicates the need for more care in the installation of grain door barricades. We must not overlook the importance of a thorough inspection of each car tendered for bulk grain loading. The fact that so large a percentage of leaks are at the grain doors does not detract from the importance of the thorough examination that should be given the entire body of each car that is tendered for bulk grain loading. In this connection, may I point out the major defects in cars that make them unsuitable or unsafe for bulk grain loading:

1. Cars with insides saturated with oil, manure, fertilizer or stench making and unclean substances.

2. Cars with side posts, door posts, or end posts loose or broken out at bottom.

3. Cars with leaky roofs.

4. Cars in which any condition exists that precludes the making of the car grain tight and safe by the use of the available cooperage material.

In order to assure the safe transportation of the grain loaded into a car, there must be a thorough inspection of the car box both inside and outside. As pointed out, door posts, end and side posts, must be inspected and if found broken or loose at bottom, the car should be rejected. The cooper should assure himself that the side and end sheathings of cars are grain tight. Loose sheathing can sometimes be fastened by nailing; cracks between sheathing boards can be covered and made grain tight, as can cracks between the floor boards and at the end of short floor boards. All such cracks should be calked with paper or covered with paper pad properly fastened in place.

Good coopering pays.

It saves grain.

It avoids annoyance.

It is an accepted axiom that the extra time it takes to make sure that a car is grain tight is less than the time it takes to file a claim.

Railroad Abandonment

The Burlington is permitted to abandon 9.77 miles between Alma and Huntley, Neb.

The Big Four is permitted to abandon 18.4 miles between Trafalgar and Martinsville, Ind.

The Illinois Central is permitted to abandon 16.27 miles from Potomac, Ill., to Hedrick, Ind.

Nashville-Franklin Railway has asked permission to abandon 16.5 miles from Franklin to Nashville, Tenn.

The Sugar Land Railway Co. is permitted to abandon 11.66 miles between Cahill and Hickey, Tex.

The Omaha Road asks leave to abandon 7.19 miles of main track from Spring Valley to Elmwood, Wis.

C. & E. I. is permitted to abandon 51.46 miles of the southeasterly end of the branch in Sullivan County, Ind.

The St. Joseph, South Bend & Southern has been given permission to abandon 25.04 miles between South Bend and Baroda, Mich.

The Milwaukee Road has been given a favorable report by an examiner on abandonment of 16.8 miles between Otis and Doering, Wis.

The railroad brotherhoods have asked the Interstate Commerce Commission to refuse the Erie permission to abandon 73.04 miles between Avon and Painted Post, N. Y.

Senator Millikan of Colorado testified before the Senate Interstate Commerce Committee that junking of railroad branch lines in the process of federal government requisitioning, without previous notice to the railroad companies or the people served by such lines, was a perfect example of futile, senseless and arbitrary policies resulting in repeal, by administrative fiat of Acts of Congress.



U.S. TRAVEL 1942 STYLE

In the months since Pearl Harbor the railroads of the United States have carried three times as many soldiers as in the same months of the last war.

Of the 6,800 Pullman sleeping cars and 17,500 passenger coaches on the railroads today, a great part are assigned to military movements — and the armed forces have first call on all the rest.

Besides troop movements, there are those who must travel on

essential war business. There are service men on furlough. There is the shortage of tires and the rationing of gasoline — all adding to the demand for space on the trains.

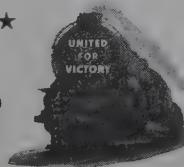
That demand must be met with the cars we have — other war needs make it impossible to get any more.

DON'T WASTE TRANSPORTATION

Plan early. Make reservations and buy tickets as far in advance as possible. **Avoid week ends.** Do your traveling in the middle of the week whenever possible. **Travel light.** Limit your hand baggage to actual requirements. Other baggage can be checked. **Plans changed?** Cancel your reservation promptly if your trip is deferred or called off. It will help the other fellow.

So please help the other fellow who *must* travel — and help yourself — and help us to get the best use out of what we have.

★ ★ ★ ★ ★
ASSOCIATION OF
AMERICAN



★ ★ ★ ★ ★
RAILROADS

WASHINGTON, D. C.

Patents Granted

(Since last published in the Journals)

No. 2,297,632. Conveyor. Alfred J. Mosley, Aurora, Ill. Loops carried on a drag chain by means of which they are drawn thru casing to move materials contained in the casing constitute the basic idea behind this device.

No. 2,289,832. Corn Grib Fastener. George John Flesner, Walnut Grove, Minn. Consists of slats, wired flexibly together, and links for joining a length of these slats into a cylindrical shape, standing on end, to hold ear corn.

No. 2,296,507. Vehicle Lifting Device. Glen E. Donaldson, Laurens, Ia. The arms of the tire engaging hooks are movable with relation to each other. A chain adjustably limits the movement of these arms to make the hooks fit various size wheels.

No. 2,297,529. Rotary Motor. Frank Berry, Corinth, Miss. Principal point to this device is a rotary piston instead of one with the customary reciprocating movement. This is associated with fuel inlet and exhaust ports which operate to keep the piston in motion.

No. 2,298,472. Conveyor Loading Device. Victor I. Dudley, Franklin, Pa., assignor to Joy Manufacturing Co. A frame which is attachable to a horizontal conveyor belt frame, designed to secure baffles which direct material being loaded to the middle of the troughed conveyor belt.

No. 2,299,297. Car Door Lifting Mechanism. Wilfred A. Beauchamp, Chicago, Ill., assignor to Youngstown Steel Door Co., Cleveland, O. A lever actuates eccentrically mounted cores held in a channel housing to lift a sliding car door and allow it to be rolled back easily. The device is a permanent attachment.

No. 2,295,940. Bag Turning Machine. Alfred J. Ersted, Menlo Park, Cal. An automatic machine having parts for holding, for turning, and for removing bags, and controls to vary tensions of belts, and speed of operation of one part of the machine with relation to other parts, so it may be adjusted to handle bags of varying lengths.

No. 2,296,014. Grain Tank. George Benzel, Sr., George J. Benzel, and Jake Benzel, Jr., Walla Walla, Wash. A hopper bottomed box for a grain truck is fitted with a drive shaft and a screw conveyor at the rear wall of the hopper which augurs the grain to a discharge spout and to another screw conveyor for moving grain from the truck.

No. 2,296,150. Respirator Means. Charles H. Dockson, Detroit, and Harold S. Davis, Grosse Pointe Park, Mich., assignors to Martindale Electric Co., Lakewood, O. The respirator consists of a frame for holding dust filtering means to cover the mouth and nose of the wearer. Properly spaced projections engage the nostrils of the wearer.

No. 2,298,830. Corn Sheller Attachment. John D. McGillis, Chippewa Falls, Wis. Improvement consists of a frame with a pair of downwardly bowed diverging legs connected at the front ends by a cross bar. This hinged frame supports a semi-cylindrical screen which has spirally arranged perforations for the passage of shelled corn.

No. 2,297,936. Variable Speed Drive. Edwin C. Ballman, St. Louis, Mo. Consists of a motor with a shaft, and a variable-diameter V-pulley with mutually adjustable side flanges. A support is fixed relatively to the center-line of the belt, and a pivoted lever is moved up and down to vary the flanges and change the effective diameter of the pulley while maintaining belt alignment.

No. 2,296,007. Grain Loader. Jacob Paul Weisenberger, Grayson, Saskatchewan, Can. A permanent mechanism for loading grain into a truck which is actuated by the motive power of the truck. It consists of shafting and driving means, and a couple of screw conveyors encased in a conduit and connected with a universal joint so that the end conveyor may be moved about to pick up grain from a bin.

No. 2,298,332. Grain Removing Device. Lester J. Applegate, Gilmore City, Ia. Mechanism for removing grain from storage bins consists of a conveyor frame for supporting a screw conveyor which is open thru the greater part of its length, but closable at the bottom portion with a detachable chute supported by the frame. The screw conveyor swings up and down to follow the level of grain in a storage bin.

No. 2,298,712. Feed Grinding Machine. Henry J. Mankoff, Wichita, Kan. A casing fitted with breaker bars on the inside which are rotatable to make use of all of their edges. Essential feature is an offset portion of the housing which has a plurality of V shaped ribs on its inside which transversely cross the housing. A head on a shaft is fitted with pieces that grind the grain in connection with these ribs. A fan blows the reduced grain thru a screen to a meal collector.

No. 2,299,723. Rodent Poison Feeder. Allen R. Allbright, Oakland, Cal. A housing with walls, bottom and top to prevent rodents entering except by openings provided. Housing can be fastened securely to the floor at a selected point. Housing holds a tray which is removable, and which is filled with poison as required.

No. 2,298,566. Rotary Scoop Type Machine for Handling Bulk Materials. Charles S. Johnson, Champaign, Ill., assignor to the C. S. Johnson Co., Champaign, Ill. A rotary scoop type machine for handling loose bulk material. This consists of a wheeled cart, a plurality of scoops for movement in relation thereto, a source of power, and a hopper for holding the materials scooped up. The hopper is fitted with a drain for emptying.

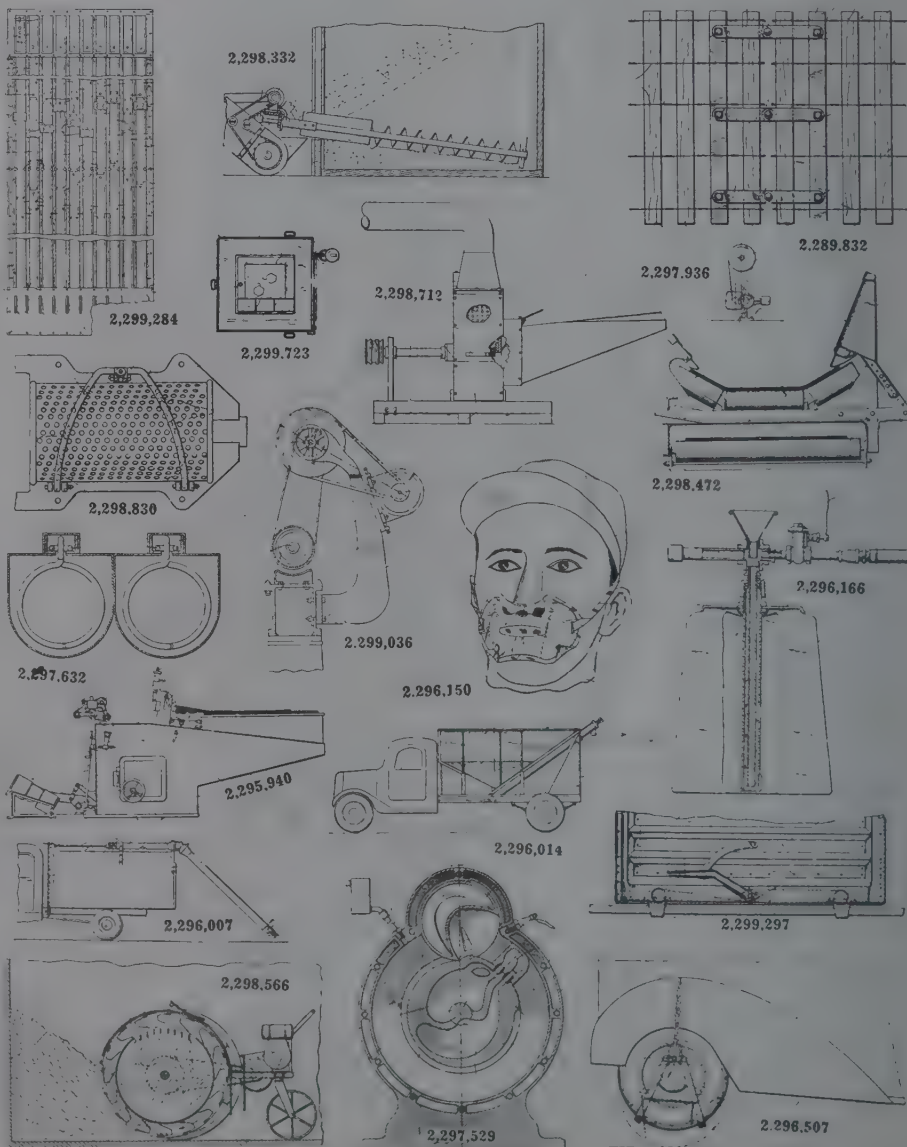
No. 2,296,166. Seed Duster. Frank A. Klein, Keota, Ia. A device for applying a dust-like treating material to grain in a sack. It is a tubular distributor with perforated side walls, closed at its lower end, and containing a discharge tube. This is connected to an air line, and a funnel arrangement for admitting the treating material. Means for controlling the air pressure is provided to give even distribution of the dust thru the perforations the full length of the distributor tube.

No. 2,299,284. Market Quotation Board. Edward H. Steidemann, Normandy, Mo. An automatic board that records increase or decrease with relation to a fixed recording of the previous close, along with variable shifts in the market. Device makes use of a frame and a market quotation tape which may be adjusted to selected high and low market quotations. The market quotations on said tape are so spaced and associated with fixed percentage increase and decrease scales as to indicate definite percentage increases and decreases from selected higher and lower quotations, respectively.

No. 2,299,036. Variable Speed Transmission Device. Earl A. Rivers, Los Angeles, Cal., assignor to Samuel Given, Beverly Hills, Cal. A combination of a drive pulley of the variable diameter V-type in connection with a driven pulley of the same type, which in turn motivates a flat pulley for operating machinery by means of a flat belt. Changes in speed are effected with adjustments of the variable diameter V-type pulleys.

Books Received

DISTILLERS' GRAIN MANUAL, compiled by Robert T. Willkie, and Rolland S. Mather, and published by Joseph E. Seagram & Sons, Inc., Louisville, Ky., gives the origin, history, botany, classification, source, and types for distillery purposes of corn, rye, barley, wheat, sorghum, and sugar cane. Grain from time of harvest on the farm, thru farm storage, terminal storage and control of stored grain insects, is studied. Methods of handling grain at distilleries, from inspection thru unloading, weighing and milling, are reviewed, as are the methods for handling and storing meal. Stillage, production, analysis, and feeding values of distillers' dried grains, and distillers' dried solubles, are explained. A 56-page volume, bound in maroon cloth covers, necessarily brief in its treatment of the subject.



Grain and Feed Trade News

Reports of new elevators, feed mills, improvements; changes in firms; fires, casualties, accidents and deaths are solicited.

CALIFORNIA

Davis, Cal.—The Donnell Grain & Warehouse Co. is charged with selling and purchasing second-hand grain bags above ceiling prices, in a complaint filed in the Federal District Court by the Office of Price Administration.

CANADA

Vancouver, B. C.—R. C. Milroy, head of the Milroy Grain Co., has been named vice-pres. of the Vancouver Grain Exchange.

Fort William, Ont.—Emil Rancourt, 46, of Port Arthur, employed by the Superior Elvtr., recently was fatally injured in a fall from a box car at the elevator.

Regina, Sask.—The Saskatchewan Pool Elevators, Ltd., handled 59,875,904 bus. of all grain for the crop year ended July 3, 1942, according to a report made at the recent annual meeting held here by the organization.

Fort William, Ont.—For the purpose of establishing the amount of drawback to be paid on deliveries of flour and wheat products during the month of November, the Canadian Wheat Board has announced that the average price established for No. 1 Northern in store at Fort William and Port Arthur is 90½¢ per bushel, and for No. 1 C. W. Amber Durum 95¾¢ per bushel.

COLORADO

Glenwood Springs, Colo.—P. H. Hertz, formerly of the Antonito (Colo.) Mill & Elvtr. Co., is now with the Farmers Milling & Power Co. here.

ILLINOIS

Casner, Ill.—A. B. Chapman, 74, retired grain dealer and farmer, died recently.

Chicago Heights, Ill.—Fire caused a small loss at the J. F. Leising Co. elevator Dec. 6.

Paris, Ill.—William H. Wade, 74, who had been engaged in the feed business for 29 years, died here Dec. 7.

Martinton, Ill.—H. E. Paaske has purchased the local mill and will do grinding the first three days of each week.

Radford, Ill.—Ora E. McDaniel, who had been in the grain business here for 29 years, died Dec. 1 after a brief illness.

Walnut, Ill.—A 3,000-bu. grain storage bin has been erected in the rear of the Atherton Grain Co. elevator, and has been filled with corn.

Erie, Ill.—Ralph Y. Breed, 81, formerly in the grain and fuel business here for many years before moving to Crookston, Minn., died recently at his home in Crookston, following a cerebral hemorrhage. Interment was in the Princeton cemetery.

Gridley, Ill.—Wilber H. Boies, partner of Henry Blessman in the firm of Boies & Blessman Co., entered the U. S. Army Nov. 9. The business has been taken over by Mr. Blessman under the firm name of Boies & Blessman, Henry Blessman, Prop.

Beardstown, Ill.—Robert H. Hommel, Jr., has been made vice-pres. of Schultz, Baujan & Co. He returns here from Chicago after an absence of a year and a half during which time he was employed as sales manager of the B. A. Eckhart Milling Co.

Monmouth, Ill.—Herbert W. Brown of Ashland, O., has purchased a large concrete building formerly used for coal storage by a local lumber firm, and idle for some time, and is using the remodeled structure for soybean storage. The reinforced building will hold 40,000 bus. of beans.

Farmer City, Ill.—Scholer & Gring, who have elevators here, at Dewitt and Heyworth, have shipped several carloads of corn cobs recently to a large eastern war plant, where a much needed chemical is extracted from them. Widening horizons of chemical research suggest that the corn cob business may develop even more in peace time. One of the chemicals found in cobs is used in the refining of lubricating oils and the manufacture of plastics.

CHICAGO NOTES

Ralph Brown will retire Dec. 31 from partnership in B. B. Denniston & Co.

Board of Trade members will vote Dec. 29 on an amendment to Rule 210 providing that no member may accept or carry an account without adequate margin, and that the directors may set margin requirements.

R. P. Jarrett, of Jarrett-Feely Co., Atlanta, Ga., brokerage firm handling cottonseed meal, hulls, linters and peanut meal, has accepted the position of field representative of the C.C.C. in the Atlanta area, and will work under supervision of the regional district office in Chicago.

Mrs. Mary Bennett, wife of James E. Bennett, head of James E. Bennett & Co., grain and stock commission house with extensive wire facilities over the nation, died Dec. 14. Funeral services were held at St. Chrysostom's Church and interment was Dec. 17 at Memorial Park Cemetery.

The directors of the Board of Trade have approved a ruling of the to-arrive grain committee providing for deductions to be made from the net Chicago to-arrive bids on wheat, soybeans, corn, rye and oats, track country stations. For example when the freight rate amounts to 10¢ per 100 lbs. the deduction will be 6¼¢ on wheat and soybeans, 5¼¢ on corn and rye and 3¼¢ on oats, per bushel, thus including the transportation tax.

Beware!

Notwithstanding we have frequently warned our readers of the sharp practices of unauthorized subscription solicitors, a number of swindlers using different names, but having no certificate of authority from us, continue to collect money for the Journals without ever being in our employ or having authority to represent us in any capacity. Calling on grain dealers, they always know that your subscription has expired and urge an immediate renewal for a long term. Your bank should credit your account with all forged checks and return them to the agency presenting them for payment. Any information which will assist in stopping the swindling practices of these sharpers will be most gratefully received.

Grain & Feed Journals

CONSOLIDATED

CHARLES S. CLARK, Mgr.

The nominating com'ite of the Chicago Board of Trade has submitted the following ticket for the coming election to be held Jan. 11: P. R. O'Brien, pres.; H. C. Schaack, 1st vice-pres.; R. F. Uhlmann, 2nd v.-pres.; directors: Wm. Enke, Jr., A. F. Lindley, J. C. McClin-tock, Roland McHenry, A. W. Mansfield. A contest for the presidency developed with the filing of a petition for G. Willard Hales, chairman of the Hales & Hunter Co. He is a director of the Exchange whose term expires this year. Albert C. Fischer has been nominated by petition for director.

The two Rock Island Terminal Elevators C and D, of 4,000,000 bus. capacity, will continue to be operated by the Continental Grain Co., lessee, which now becomes owner thru a sale to its subsidiary, the East St. Louis Grain Elvtr. Co., as authorized by the federal court Dec. 18. The Rock Island bought the elevators in 1904 for \$1,000,000 and now the trustees of the railroad company realize \$400,000 by the sale, which includes machinery, fixtures and tracks serving the elevators. Annual expenditures for maintenance, improvement and taxes have exceeded the profit on the \$45,000 rental.

INDIANA

Versailles, Ind.—The Versailles Feed Co. is installing a new 15-ton scale.

Kewanna, Ind.—The Standard Elvtr. Co. has improved and remodeled its office.

Pine Village, Ind.—Rue Alexander, who operated the Pine Village Feed Co., is the newly-elected sec'y of state.

Linton, Ind.—The Johnson Feed & Supply Co. has installed a new corn sheller of 250 to 350 bus. per hour capacity.

Indianapolis, Ind.—Oscar New suffered severe lacerations Dec. 11 when his hand caught in a wheat conveyor at the Acme-Evans Co. mill where he is employed.—P.J.P.

Alexandria, Ind.—Harold Head, former grain and coal dealer here who recently closed out his business to answer a call for service in the U. S. Army, was rejected by army physicians and has gone to Kokomo for several weeks' stay.

Warren, Ind.—Hemp mills estimated to cost about \$335,000 each, are proposed for Warren, Nappanee, Remington, Frankfort, and Flora. L. M. Vogler, chairman of the Indiana United States Defense Administration announced. Each mill will process about 4,000 acres of hemp, but this acreage must lie within 10-mile radius of proposed mills.—P.J.P.

Wakarusa, Ind.—Layer Bros. Elevators, formerly known as Wakarusa Milling Co., have leased their three grain elevators located here, at Pierceton and Claypool, to Sunshine Stores, Inc., Ft. Wayne, the retail stores division of Allied Mills, Inc., Chicago. These elevators will operate as separate units and be known as Wakarusa Milling Co., George Brenneman, Jr., and Milton Brown, co-managers; Pierceton Elvtr. Co., Merrett Bennett, manager, and Claypool Elvtr. Co., Herbert Clark, manager. N. L. Layer & Sons, Bert and Harry, purchased the local mill and elevator in 1917 from the late Jacob and Hannah Weldy. N. L. Layer died later the same year, and the brothers continued operation of the business. The elevator at Pierceton was added in 1933 and the Claypool elevator was purchased from Richard Cripe in 1935.

Winchester, Ind.—Percy E. Goodrich, president of Goodrich Bros. Co., who has been confined to his bed for some time, is rapidly improving and expects to greet Kris Kringle Christmas morning as usual.

IOWA

Pioneer, Ia.—The Farmers Grain Co. of Pioneer has been dissolved.

Plymouth, Ia.—Ed Wyborney is the new assistant at the Farmers Elevator.

Templeton, Ia.—We bought the Farmers Elevator Nov. 27, 1942.—Chas. Dozler Grain Co.

Ossian, Ia.—John Jaster, who operated the feed mill here since last April, left for the Army.

Montgomery, Ia.—The George H. Anderson elevator was destroyed by fire Dec. 14 together with a large amount of grain and seed stored there and the elevator coal sheds.

Stout, Ia.—Jim Wilson has resigned as manager of the A. J. Froning Grain Co. elevator and has been succeeded by Harm Rademaker, who has been employed as helper.

Persia, Ia.—Fred Zacharias is manager of the Bowles Grain Co. elevator. E. A. Bowles, who has been managing the business for several weeks, left for Denver, Colo.

Pomeroy, Ia.—Henry Miller, who has been employed as assistant at the Farmers Elevator for several years, resigned the position recently and has been succeeded by Bernard Streit.

Des Moines, Ia.—The Des Moines Flour & Feed Club at its regular monthly meeting held Dec. 7 at the East Des Moines Club held an open forum for discussion of government regulations.

Larrabee, Ia.—Harold C. Stientjes, for the past three and a half years assistant manager of the Farmers Elvtr. Co. at Matlock, Ia., has been appointed manager of the Farmers Co-op. Elevator.

Washington, Ia.—Lloyd Swift is the new manager at the Freshwaters' Feed Store. Mr. Swift has been supervising the mixing of feeds and delivery work. Now, however, he will assume complete responsibility of managing the local store.

Nora Springs, Ia.—The Nora Springs Mill recently was enlarged by the addition of a 16 x 22 ft. feed storage warehouse. Nick A. Schuver, owner and manager of the mill, stated the mill will be the outlet for Pillsbury's poultry and livestock feeds in the future.

Seney (LeMars p. o.), Ia.—John Hartog, 36, operator of the elevators bearing his name here and at Granville, died Dec. 11, at the LeMars hospital, where he underwent an emergency appendectomy Dec. 7. Death was due to complications that set in following the operation.

Jefferson, Ia.—The D. Milligan Co., grain, lumber and coal concern operating here since 1869, has been dissolved. Founded by D. Milligan, pioneer resident, the business has continued thruout the years in the Milligan family. The various locations owned and operated by the company have been divided between two new partnerships to be known as Milligan Bros. and E. A. Milligan & Son. Milligan Bros., owned by Mrs. Frank D. Milligan, whose husband passed away earlier this year, and her sons, Frank T. and Robert P., now own the stations here, at Farlin, Cooper and Winkelman Switch. They will be operated by Frank Milligan until the end of the war when he will be joined by his brother, Robert, who is a captain in the U. S. Army overseas. E. A. Milligan & Son, owned and operated by Elmer A. Milligan, lone survivor of the original partnership, and his son David, have the stations at Rippey, Grand Junction, Paton, Churdan, Adaza, Lena, Angus and West Side. An office will be opened here by the latter firm. No disposition has been made as yet of the business at Missouri Valley.

Spencer, Ia.—The Tyden Feed & Livestock Co. held a sales meeting here recently for dealers in Northwest Iowa and southern Minnesota. E. E. Sleichter, local representative, was in charge of arrangements. George C. Cook of Dougherty, head of the company, conducted the meeting.

Goldfield, Ia.—S. Jones, who has owned and operated the Jones Feed Mill the past several years, sold the business to the Farmers Elvtr. Co. who took possession Nov. 30. It is planned to move the stock of feeds and the grinding equipment to the Farmers Elevator at a later date. Mr. Jones expects to be called to military duty soon.

KANSAS

Leavenworth, Kan.—Fire caused a small loss at the J. C. Lysle Milling Co. plant Dec. 2.

Wichita, Kan.—The Kansas Milling Co. sustained an electrical breakdown loss recently.

Waco, Kan.—The Kansas Milling Co. elevator was damaged by recent high winds. The loss was small.

Sterling, Kan.—The Arnold Milling Co. employees and their families will be entertained at a Christmas party by A. L. Jacobson, president and manager.

Meade, Kan.—The Meade Co-op. Elevator has installed a new 40-ton scale. The old elevator will be remodeled soon, floors to be repaired and general improvements made to give better storage facilities. J. W. Edwards, manager, announced.

Lebanon, Kan.—The Eberhardt & Simpson Grain Co. of Salina has purchased the west elevator here which has been opened for business under the name of the Lebanon Grain & Feed Co. Melvin F. Willett, formerly of Asherville, is the manager.

Marquette, Kan.—Harry Harmon, who has been manager of the Co-op. Farmers Union Elvtr. Co. since its organization three years ago, resigned recently, and has accepted a position in Wichita. Clarence Alstatt has been named acting manager until the annual meeting. He has been employed at the elevator for some time.

KENTUCKY

Bowling Green, Ky.—The Sixth U. S. Circuit Court of Appeals recently reversed and remanded to the lower court a suit growing out of a controversy concerning the title to wheat on deposit with the Bowling Green Milling Co., Inc., when it went bankrupt. District Judge Mac Swinford on Sept. 23, 1941, held that the wheat deposited was sold to the mill and not "in bailment." Appellate Court ruled

that the wheat deposited by a large number of persons was not sold, and that it should be distributed to the holders of certificates on a pro rata basis.

Newport, Ky.—Articles valued at \$70 were stolen from the office of the Keller Hay & Grain Co. the night of Dec. 1, including a typewriter, adding machine, radio and three sweaters. Entrance was gained by use of a duplicate key.

Louisville, Ky.—So far as is known the only distillery around Louisville to use ready ground wheat is the Frankfort Distilleries. Brown Forman Co. is considering plans for trying it out. Dr. Frank Shipman, of the Brown Forman Co., chemist and director of company production, said that while he had not tried it in the plant, laboratory tests had been quite satisfactory. It is understood that in addition to Frankfort Distilleries the Schenley Distillers are using granular ready ground flour meal in some of their northern or eastern plants, and that American Distilling Co., Pekin; Commercial Solvents, at Terre Haute; and some of the duPont alcohol plants have been using such flour.—A.W.W.

MICHIGAN

Charlotte, Mich.—The Farmers Elevator has made arrangements to weigh and grade all soybeans which the C.C.C. will purchase and store in the bins put up here for that purpose.

Holly, Mich.—The Holly Grain & Produce Co., Arthur Downing, mgr., has purchased the Barrett Fuel & Supply Co., and taken possession of the business. Mrs. Downing, who has been in the elevator office, will transfer to the coal office and Mr. Downing will remain at the elevator.

Detroit, Mich.—The Commercial Milling Co. has sold its business and plant of 2,500 bbls. daily capacity to the International Milling Co. of Minneapolis. The business was founded 87 years ago by Peter Henkel, and had been operated by the Henkel family ever since. The commercial business will be continued as a separate unit of the International Milling Co. By purchase of the properties the International Milling Co. has come into possession of dockage facilities equal to any existing along the river in this area. From this point grain is unloaded into elevators directly from the lake freighters. No tugs are required to move the boats in or out.

MINNESOTA

Waldorf, Minn.—Harold Miller, formerly of Welcome, Minn., has accepted a position at the Waldorf Feed Mill.

Winona, Minn.—Fire inside a feeder on a flax processing machine at the Archer-Daniels-Midland Co. plant caused a small loss recently.

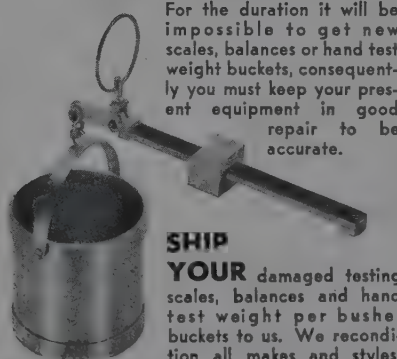
Welcome, Minn.—A. F. Krueger of Fairmont, owner of the Welcome Feed Mill, is in charge of the business following the resignation as manager of Harold Miller.

New Ulm, Minn.—The Eagle Roller Mill Co. has completed and placed in operation its new modern commercial feed plant which will triple the output of Eagle feeds. The company mailed invitations to 20,000 southern Minnesota farmers to inspect the plant.

Winona, Minn.—Feed dealers in the county met at the Winona Hotel Dec. 3 for a general discussion of feeding problems. H. R. Searles, extension dairyman, and Dora Cooke, poultry specialist, were present to talk over with the dealers the part they can play in the food for freedom program.

Fairfax, Minn.—The Farmers Grain & Stock Co. has purchased the warehouse belonging to the old mill, now the property of the Fullerton Bottling Works, and will move it to a location adjoining its elevator. The warehouse will be remodeled and put into condition to be used for a feed grinding mill, office and warehouse.

SCALE REPAIRS



For the duration it will be impossible to get new scales, balances or hand test weight buckets, consequently you must keep your present equipment in good repair to be accurate.

SHIP YOUR damaged testing scales, balances and hand test weight per bushel buckets to us. We recondition all makes and styles.

Prompt service. Work guaranteed.

J. C. KINTZ, Cedar Rapids, Ia.

DULUTH LETTER

Donald A. Cameron, 73, engaged in the grain and feed business up to a few years ago when he retired, died in a local hospital Dec. 15.—F.G.C.

The Duluth Board of Trade Clearing Ass'n will hold its annual election Jan. 5 to elect two directors to serve three years each. Directors' terms expiring are: H. W. Wilson and H. S. Newell. Present directors are Geo. Barnum, F. B. Mitchell, G. H. Spencer, H. W. Wilson, W. R. McCarthy, H. S. Newell, H. B. Stoker. The movement of grain and trading operations on the exchange is being affected by the usual holiday dullness.—F.G.C.

James S. Graves, 83, a pioneer grain man, serving as general manager of the Capitol Elevator Co. since 1904, died in a local hospital Dec. 14 of a heart attack. Mr. Graves with John F. McCarthy, deceased, founded the elevator company and thruout the 38 years service was one of the leading and active traders in the Duluth market. He retired last August as general manager for a rest, but remained closely interested in the grain trade. A few days before his death he had made reservations for going to Florida with his wife.—F.G.C.

MISSOURI

Summersville, Mo.—Fire caused a small loss at the Co-op. Ass'n plant recently.

Shelbyville, Mo.—Eugene M. Cadwell, 65, formerly in the grain business here, died Nov. 30.—P.J.P.

St. Louis, Mo.—Edward J. Paule, 73, who retired from the grain and milling business in 1933, died of a heart ailment Dec. 5.—P.J.P.

Breckenridge, Mo.—Edgar Bowers of Hamilton is new manager of the H. H. Green Mill & Elvtr. Co. elevator, succeeding Chas. Tarwater.

Pleasant Hill, Mo.—The Swiss-American Milling & Export Co. of Chicago has leased the flour machinery in the plant of the Moundridge (Kan.) Milling Co., until July, 1944, with option to purchase the property at any time so desired.

Tuscumbia, Mo.—The Anchor Milling Co. recently built a corn elevator, constructed entirely of native oak lumber and salvage pine and roofing, to take care of shipments of shelled corn. A new hammer mill has been installed. Owing to the shortage of labor at the present time, custom grinding will be done on Thursday, Friday and Saturday.

Chillicothe, Mo.—William Scruby, 82, head of the Scruby Bros. Grain & Implement Co., and a former mayor of Chillicothe, died Nov. 28. For many years before locating here in 1888 Mr. Scruby was a resident of Wheeling, where, with his father and two brothers, Frank and Ed Scruby, he formed the Scruby Bros. Grain & Implement Co. In 1888 they purchased the Wes Jacobs Implement Co. in this city. In 1891 the company's present home on Washington St. was built.—P. J. P.

KANSAS CITY LETTER

Paul C. Trower has been named a director of the Kansas City Board of Trade to fill a vacancy caused by the enlistment of J. C. Brackett in the army.

John Stark, first v.-pres., and E. O. Bragg, were nominated as candidates for president of the Kansas City Board of Trade during 1943. Mr. Bragg withdrew his name, assuring the post for Mr. Stark. The election will be held Jan. 5. Nominees for second v.-pres. are: E. R. Jessen and H. F. Spencer. E. E. Klecan, incumbent, automatically succeeds to the first vice-presidency. Six directors will be chosen from the following: L. J. Byrne, Jr., A. H. Fuhrman, P. G. Hale, R. P. Harbord, E. C. Hoebel, G. A. Johnson, J. F. Leahy, Edmund Marshall, L. S. Myers, J. P. Parks, Milton W. McGreevy, A. D. Thomason.

Directors of the Grain Clearing Co. of the Kansas City Board of Trade will be chosen from the following: J. K. Christopher, W. J. Mensendieck, S. B. Gregg, Fred W. Lake, B. J. O'Dowd, W. B. Lincoln, H. J. Smith, R. H. Sturtevant.

MONTANA

Bozeman, Mont.—Chas. Kenneth Liquin, 61, local grain broker, died of a heart ailment at the Deaconess Hospital Nov. 28.

NEBRASKA

Buda (Kearney p. o.), Neb.—The Farmers Grain Co. of Buda has been dissolved.

Petersburg, Neb.—The Crowell Elvtr. Co. has reroofed and repaired its local elevators.

Cadams, Neb.—Fred Stanley is looking after his elevator interests here on Monday, Wednesday and Friday each week.

David City, Neb.—The motor of the feed mixer at the David City Grain Co. elevator became overheated recently, but no damage was done.

Omaha, Neb.—Frank A. Jenner, formerly traveling freight agent at Detroit, has been appointed local grain agent for the Burlington route.

Grand Island, Neb.—Kenneth V. Myrberg, formerly employed by the Gooch Milling Co. at Norfolk, has taken a position here with General Mills.

Omaha, Neb.—The permit system on storage wheat to Omaha has been cancelled as of midnight, Dec. 11. No further permits are required for storage wheat.

Newman Grove, Neb.—Mark Wagers, manager for the Crowell Elvtr. Co., is seriously ill. The elevators are being operated temporarily by F. S. Pendlay, superintendent of elevators.

Grand Island, Neb.—The old Henry Glade Mill site, owned by the Nebraska Consolidated Mills Co., and now known as the Camaras Bros. parking lot, was placed on sale at public auction Dec. 15. Nebraska Consolidated Mills abandoned it as a mill site when it moved into its present plant in 1936. Until that time it had been the site of a grain elevator and flour mill dating back to the late 1860's.

Franklin, Neb.—Harry Dixon and Harold Ball, arrested at Scottsbluff, Neb., after robbing the Mitchell (Neb.) Elevator, also robbed the Harris Grain Co. here. While the loot taken from some of the 19 robberies to which they confessed, has been located, none of the articles stolen from the local company have been recovered.

Mitchell, Neb.—Harry Dixon of Oklahoma and Harold Ball of Scottsbluff were lodged in jail recently, charged with robbing the Mitchell Elevator among other local business houses. The men admitted their guilt, possession of a pencil from the Mitchell elevator bringing about the confession. A portable radio was taken from the elevator but the safe was not opened. The robbers were sentenced to five years and are now serving their sentence.

Hartington, Neb.—R. H. Jenny, manager of the Holmquist Grain & Lumber Co. elevator, has completed the enviable record of thirty consecutive years of employment without missing a single day from illness or accident. Mr. Jenny came here Nov. 25, 1912, to manage the elevator. In recognition of his services the Holmquist company presented him with a gold wrist watch, engraved with his name and the date he started working for the company.

Holdrege, Neb.—V. C. Wilson, manager of the Holdrege Equity Exchange elevator, has announced that the elevator will pay \$1.09 per cwt. for 52-lb. test weight Leoti grain. This is the first time in the history of the county that waxy Leoti grain sorghum has been purchased in this section of the state for industrial purposes. The grain will be shipped to Gibbon where a General Foods subsidiary will grind it into Leoti flour, which will in turn be shipped to processing plants to be made into starch.

Omaha, Neb.—The proposed alcohol plant promoted by the Farm Products Processing Co., has been approved by Rubber Administrator F. M. Jeffers and word from Washington is to the effect the 17 million gallons per year plant will be built here, estimated to cost \$1,841,000. The plant will be located in the old street car company power plant, where construction work is expected to begin within 30 days. The completed plant will be leased to the Farm Products Processing Co., for operation under government supervision. The company also expects to get an option to buy the plant at the end of the war, the cost to be the government's investment less depreciation. The plant will use about six million bushels of grain a year.

Every Nu-Hy INSTALLATION DEMONSTRATES

EFFICIENT PICK-UP + UNIQUE DESIGN = HIGHEST CAPACITIES
EFFICIENT DISCHARGE + CLOSER SPACING = AT ANY PRACTICAL OPERATING BELT SPEED

THE OLD WAY

Gaps between buckets cause more turbulence and vibration, resulting in less efficiency and limited capacity, more damage to grain, and undue wear on equipment.

THE "NU-HY" WAY

Continuous spacing reduces gaps, produces smooth operation, greater efficiency and elevating capacity, less damage to grain, and removes undue wear on equipment.

THE GREATEST BUCKET ACHIEVEMENT IN A DECADE

This bucket is the logical answer to bucket elevator problems. Its scientific shape eliminates idle belt space... produces streamlined action and transforms pick-up impacts into smooth-flowing pulsations.



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Tekamah, Neb.—Ray Peters has been transferred here from Winnebago to manage the Holmquist Lumber & Grain Co. elevator following the death of John W. Blacketer, who had been manager.

Hartington, Neb.—The Star Elevator, successor to John Herfkens Elevator, held a grand opening Dec. 12 with an afternoon and evening program featuring free entertainment, contests and prizes, and live stock demonstrations. Art Arens, owner of Star Elevator, recently purchased the Herfkens properties and the Great Northern Mill to provide processing and distribution facilities for Star Adapted Hybrid Seed Corn, which he and his father produce on their farms northwest of here. The elevator will maintain grain handling services and a complete feeders supply department. It is under the active management of J. C. Rosse. Purchase of Great Northern Mills, operated here for many years by Carlson Bros., took place early this month, the new owner taking immediate possession. Mr. Arens will remodel the mill and use it for a processing plant for his seed corn and as a mixing plant for live stock feeds.

NEW ENGLAND

Brockton, Mass.—Fire swept an unused grain elevator and storage warehouse of the J. B. Nye Co. Nov. 10.

Smyrna Mills, Me.—Fire recently destroyed a large warehouse filled with feed, flour and other provisions owned by Earl V. Noyes.

NEW YORK

Oswego, N. Y.—The Oswego Soy Products Corp. plant and warehouse were swept by fire the night of Dec. 1.—P. J. P.

Modena, N. Y.—Ludwig Brandt, 75, who has operated a grist mill and manufactured cereals for 42 years in Tuttle town, died recently.

Buffalo, N. Y.—For the first time in its 36 years, the Corn Exchange now is using women board markers. They are Miss Eleanor Smith and Mrs. Lucy Leonard, who have been employed by the Exchange for many years. Mrs. Leonard has been sec'y to W. E. Maloney, sec'y, for 10 years.

New York, N. Y.—Chas. J. Linker, 59, vice-pres. of the American Maize Products Co., with which firm he had been associated since 1908, died Nov. 28 at his home in East Orange, N. J.

Cayuga, N. Y.—Edison E. Evans, vice-president and director, Beacon Milling Co. of which he was one of the founders, died Dec. 5 at Maplewood, N. J. Death followed injuries received in a fall at the Maplewood Golf Club Nov. 27.

Buffalo, N. Y.—Spencer Kellogg & Sons, Inc., were obliged early in the year to charge off and eliminate completely from its accounts its investment and advances to its foreign subsidiary which produced coconut oil in Manila, P. I., because of the capture of that city by Japan, according to a report for its fiscal year ending Aug. 29. The company at the same time charged off its relatively small investment at Hankow, China, consisting of a refinery for the accumulation and preparation of tung oil, the report said. The company still owns and operates three tank steamers, but they are under charter to the government. The report said the company's new solvent extraction plant at Decatur, Ill., is operating successfully. The company more than tripled its provision for federal income and excess profits taxes in its fiscal year, and as a partial result, net profit declined to \$1,349,658, or \$2.65 a share, as compared with \$1,861,865, or \$3.66 a share in the preceding fiscal year.

NORTH DAKOTA

Grand Fork, N. D.—Frederick Riebe, 69, president of the Riebe Grain Co. and the Riebe & Riebe Grain Co., died recently. Mr. Riebe was vice-pres. of the Atlantic Elvtr. Co. and of the Kellogg Commission Co., Minneapolis, Minn., in addition to his local connections. He was a member of the Minneapolis Chamber of Commerce from 1906 to 1940.

OHIO

Steubenville, O.—The Jefferson County Farm Burd Co-op. has taken a 60-day option on the Adena Mill for \$15,000. It is planned to sell additional stock to finance the purchase of the plant. The mill has grinding, mixing, feed and grain storage equipment.

Fort Loramie, O.—William J. Sherman, Sr., 73, who was operator of the Sherman Grain Co., died Dec. 6.

Stockport, O.—The Stockport Mill on the Muskingum River was offered for sale at public auction at the court house in McConnellsville on Dec. 7.

Toledo, O.—The annual caucus for nomination of officers and directors of the Toledo Board of Trade will be held Dec. 28. Election will be held Jan. 4.

Willard, O.—Fire originating from an overheated coal stove damaged the building housing hoisting machinery for coal unloading of the Buckingham Coal & Supply Co. on Dec. 2.

Toledo, O.—Additional laboratory space is being leased by the Toledo Board of Trade for its inspection department which has been necessitated by a steady increase in volume of business. New furniture and equipment is also being installed.

New Middletown, O.—Harry Davis, local flour and feed business owner, has retired from business to enter the service of the War Department as a supervising technician, small arms division, U. S. Army ordnance. He is recognized as an authority on firearms.

St. Paris, O.—Elmer Purk, 46, died Dec. 15 en route to Piqua Hospital of injuries received when his clothing caught on a drive shaft in the St. Paris Grain Co. elevator. He was working alone and was not found until near noon. Mr. Purk had worked at the elevator since 1925.

Highland, O.—Orland Earl, 73, is rounding out 50 years as owner and operator of the old water power mill, a mill site for the past century. Earl now devotes milling entirely to the grinding of feed. He has worked around a mill for 60 years, beginning when a youth of 13. He lives at the mill.

Mantua, O.—Theodore Urban, 28, returned from California by Sheriff Robert L. Fitzgerald recently on charges growing out of the holdup of the Mantua Grain & Supply Co., remains silent, refusing to answer questions. He was arraigned on two charges of shooting with intent to kill and one for armed robbery.

OKLAHOMA

Vinita, Okla.—The Stanislaus Hay & Grain Co. has been designated to handle all oil soybeans produced by Craig County farmers for the C.C.C.

Weatherford, Okla.—Alfred Gray is manager of the Reimer Bros. branch in the Reimer Bldg. J. Roy Chapman has been employed as sales manager by the mill.

Corn, Okla.—The frame store building owned by F. E. Nikkel has been sold to the Reimer Bros. Flour Mill and will be set up at the mill location to be used for storage purposes.

Buffalo, Okla.—Stockholders of the Buffalo Farmers Co-op. Elvtr. Co. and their wives enjoyed a banquet in the Christian Church basement following the annual meeting of stockholders Dec. 9.

Hitchcock, Okla.—Ray Falkenstine, manager of the Kingfisher Elvtr. & Mill Co. for the past 27 years, resigned, effective Dec. 1. O. E. White, who has served in a similar capacity with the company for 18 years at Bridgeport, Okla., has succeeded him here.

Enid, Okla.—The W. B. Johnston Grain Co. recently purchased five lots at the W. R. Thompson Lumber Co. location. The main building on the tract will be remodeled into a modern feed and seed store. The company's present downtown feed and seed store will be moved to the new location about Jan. 4 upon completion of the remodeling. The transaction did not include the lumber stock and other merchandise.



Steinlite—the one-minute Moisture Tester—must be ordered in advance. Please place orders for delivery next year now.

THIS CHRISTMAS SEASON—

... we will not wish you Yuletide cheer. It would be insignificant compared to the cheer our fighting forces have given us ... bringing victory closer.

We will say "Thank you for your cooperation." We know it is your good will that has made Seedburo known as "Headquarters" for Grain and Seed Testing Equipment.

You can be assured that Seedburo will continue to supply the best in quality and the most complete line of testing equipment available. If we can serve you, call on us freely.

SEEDBURO EQUIPMENT COMPANY

620 Brooks Bldg.

(SEED TRADE REPORTING BUREAU)

Chicago, Ill.

PACIFIC NORTHWEST

Midlakes (Bellevue p. o.), Wash.—Fred Sorenson is new manager at the Midlakes Feed & Fuel Co.

Almira, Wash.—Will Evans has succeeded Carl Jensen as local manager of the Centennial Flouring Mills business.

Willada (Lancaster p. o.), Wash.—The Inland Empire Milling Co. recently sustained a small fire loss on stock.

Waterville, Wash.—Carl Jensen is new district manager of the Centennial Flouring Mills. He had been manager of the Almira office for the last 20 years. He succeeds Myron Estill who has joined the U. S. Forces.

Mt. Vernon, Wash.—The Skagit Grain & Seed Co. has purchased a tract of land in West Vernon, 200 ft. x 100 ft. and when conditions permit a store and nursery will be erected there. The land is across from the new warehouse recently built by the company.

Fairfield, Ida.—The Camas County Co-op. Grain Growers recently completed and placed in operation its 110,000 bu. elevator. Its overall height is approximately 125 ft., and it is equipped with automatic scales in the top. The sides will be covered with galvanized metal at some later date.

Spokane, Wash.—Officers recently elected by members of the Spokane Grain Merchants Ass'n for the ensuing year were: L. A. Rumberg, Centennial Flouring Mills Co., pres.; T. H. Hibbitt, Boyd-Conlee Co., v.-pres.; J. W. Campbell, Greely Elvtr. Co., sec'y-treas.; directors for the coming year are A. E. Scott, H. H. Jasmann and J. W. Campbell.

Sandpoint, Ida.—We will build a 20,000-bu. elevator and a 50 ft. x 100 ft. feed and seed warehouse in the spring, to be modern in every respect. The equipment will include two grinders, one a Jay-Bee type W, 75 h.p., and one smaller; a seed cleaner, grain cleaner, large mixer, and a steam roller.—C. J. Saum, general manager, Co-op. Gas & Supply Co., Inc.

LaGrande, Ore.—After choosing The Dalles as the convention city for 1943 the 15th annual convention of Eastern Oregon Wheat League closed. Millard Eakin of Grass Valley was elevated to pres.; Ray Forman of Antelope was elected vice-pres.; C. W. Smith of Corvallis was re-elected sec'y-treas. A special com'te asked the O.D.T. to grant common carriers enough mileage to handle the huge crop now in storage.—F.K.H.

Wawawai, Wash.—The old grain tram on the Charles Vollmer ranch has been razed and the material scrapped. The tram was constructed by Aaron Kuhn, an independent grain buyer from Colfax in 1900 and later operated by Bal-four, Guthrie Co. During its prime the tram handled as much as 140,000 sacks of grain per year, carrying it down the grade by gravity at the rate of 2,000 sacks per day. During its existence it handled nearly 7,000,000 lbs. The tram was a mile long, wending its way down a precipitous canyon to the river bottom more than one thousand feet below. Chas. Vollmer, Fred Hungate, Lou Wayman and Lloyd Story were the last grain growers in this area to use it.

Boise, Ida.—The O.P.A. has determined in amendment No. 76 to supplementary regulation 14 of G. M. P. R. that grain warehouses in Idaho may charge a maximum price of 15c a ton a month for storage, with 30 days' free storage and \$1 a ton for handling services. These rates, effective Dec. 9, recognize the rates set by the Idaho Public Utilities Commission in April for northern Idaho and in June for southern Idaho, but do not apply to grain warehousing for United States government agencies. These increased rates will be paid only to the extent that producers redeem their grain prior to Apr. 30, 1943, and themselves pay warehouse charges. The prior charge was 10c for storage and 85c for handling.

Seattle, Wash.—Alertness of U. S. Coast Guardsmen and a crew of workmen is credited with helping to control a fire which threatened the Albers Mill recently.

Spokane, Wash.—A general increase in charges sought by warehouse and elevator operators in Washington, Oregon and Idaho has been disapproved by the office of price administration at Washington, D. C., headquarters here of the Pacific Northwest Grain Dealers Ass'n have been informed. The O.P.A., explaining its action, said it considered a general rate increase at this time to be inappropriate. Individual firms may apply for amendment or adjustment of the maximum price regulation for their own particular operations. The National Grain Trade Council has petitioned the O.P.A. for rulings allowing warehouses in Washington and Oregon to charge higher maximum prices for grain storage, with 30 days free time, and new handling charges. These have been controlled at March levels under the general maximum price regulation. Larry M. Smith, chairman of the warehouse com'te of the Pacific Northwest Grain Dealers Ass'n and J. W. Shepard, manager of Lewiston Grain Growers, Lewiston, Ida., also traveled to Washington, D. C., endeavoring to gain the approval of the O.P.A. for the increased warehouse charges filed in Washington, Oregon, and Idaho by most elevator operators this year. Mr. Shepard is representing the North Idaho interests and the Idaho Public Utilities Commission.

PENNSYLVANIA

Berlin, Pa.—Robert T. Hillegass, a member of the firm operating the Berlin Feed Co. for a number of years, died recently, after an 11 weeks' illness.

SOUTH DAKOTA

Montrose, S. D.—Claude Butterfield has succeeded Ivan Swanson as manager of the Co-op. Grain & Lumber Co., business.

Selby, S. D.—The Selby Equity Union Exchange remembered Pearl Harbor by purchasing a \$1,000 Defense Bond in honor of its former employee, Arthur Jenison, now in service somewhere in the Pacific, and a \$1,000 bond in honor of Lee Baer, another employee sailing for parts unknown, Mgr. A. M. Hoven announced.

SOUTHEAST

Shelby, Miss.—The Denton Mfg. Co. Flour Mill, construction of which was started in 1941 and which milled its first sack of flour in July, 1942, now is in full operation.

Richmond, Va.—William Gary Bragg, 72, prominent local grain broker, died at his home Dec. 14 after a brief illness. Mr. Bragg was a native of Petersburg, Va., but had made his home in Richmond for a number of years. He was active in the grain business until a few weeks ago.—G.E.T.

TENNESSEE

McKenzie, Tenn.—The McKenzie Milling Co. is planning reconstruction of its food products plant here that recently burned with a loss of over \$100,000.

TEXAS

Kyle, Tex.—G. A. Pinkerton is new manager of the Farmers Milling Co. He formerly operated a mill at Manor.

Lockney, Tex.—An alfalfa mill will be established here by the Denver Alfalfa Milling & Products Co., to be located between the Santa Fe tracks and the highway. It will be a duplicate of the Plainview (Tex.) mill and is planned to be completed in time to operate during the next alfalfa season.

WISCONSIN

Hammond, Wis.—Stock owned by Hanson Bros. was damaged by a fire from an overheated furnace on Dec. 7.

Sheboygan, Wis.—A new feed grinder has been installed at the Falls Roller Mill, owned and operated by Albert Sledke.

Connorsville, Wis.—Henry Schlough, 53, who, with his son, Leon Schlough, operated the Connorsville Feed Mill, died Nov. 29.

Westby, Wis.—Ben J. Logan has installed a new hammer mill at his feed and seed establishment. The mill is complete with bagger and dust collector and is driven by a 40-h.p. motor.

Milwaukee, Wis.—The Froedtert Grain & Maltng Co. reports a marked growth in sales of a roasted barley beverage as a substitute for coffee, developed by the company nearly 75 years ago.

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Committee from the Pacific Northwest Grain Dealers Assn., at the Grain & Feed Dealers Natl. office in Washington, D. C. Left to right—J. W. Shepard, Lewiston, Idaho; Edward Butler, Lewiston, Idaho; and Larry M. Smith, Waterville, Wash. The men worked with OPA officials on new rates for the Pacific Northwest area.

Green Bay, Wis.—Balanced dairy rations and the A.A.A. wheat supply were subjects discussed at a group meeting of 25 Brown County feed dealers at a meeting in the court house recently. George Werner, of the University of Wisconsin college of agriculture and R. C. Schultz, of the state A.A.A. office, were among the speakers.

Frederic, Wis.—The Farmers Co-op. Exchange recently installed new elevators and conveyors to make it possible to move bulk grain more efficiently, and additional bins for grain storage. A conveyor has been installed for moving grain from the storage bins into three sacking bins near the feed mill and mixer and a new mill of larger capacity and higher speed will be installed.

Pacific Northwest Pleads for Increased Warehouse Charges

A com'te from the Pacific Northwest Grain Dealers Ass'n visited O.P.A. offices in Washington, D. C., Dec. 7-12, to plead for increased warehouse rate ceilings, at conferences arranged thru the Washington office of the Grain & Feed Dealers National Ass'n.

Swift change of facilities in the area from warehouses for bagged grain to elevators for handling bulk grain have created extra costs in warehousing, altho lowering the total spread between farmer and consumer, the com'te stated.

O.P.A. has announced increased ceilings in Idaho, and some decision regarding rates in Washington and Oregon is expected in January.

Wheat Futures Trading Lowest in 20 Years

Trading in wheat on the Chicago Board of Trade declined during November to lowest level in 20 years, although trading in corn and rye showed sharp increases, the U. S. Department of Agriculture has announced.

The turnover in wheat future on the Chicago market decreased from 125,674,000 bus. in October to 86,748,000 in November, the lowest monthly total covered by Department records, beginning in 1921. Open contracts also showed a marked decline at the end of the month.

As trading in wheat declined, rye transactions moved into first place among the grains, some 93,186,000 bus. being traded during the month.

Trading in corn futures totaled 85,575,000 bus. in November.

Trading in oats futures reached a volume of 27,832,000 bus. in November, against 30,539,000 bus. in November, 1941; and trading in soybeans decreased to 377,000 bus., against 65,870,000 bus. in November, 1941. This reflects the effect of the government floor on soybean prices and ceiling on soy products.

In the ten markets handling futures, the total trading during November was 145,713,000 bus. wheat; 94,249,000 bus. corn; 41,215,000 bus. oats; 103,697,000 bus. rye; 261,000 bus. barley; 3,784,000 bus. flaxseed, and 398,000 bus. soybeans.

Wheat trades amounted to 33,798,000 bus. in Minneapolis, 12,207,000 in Kansas City, and

2,738,000 bus. in Duluth during November. Corn trades amounted to 1,365,000 in Minneapolis and 6,460,000 bus. in Kansas City. Minneapolis in November traded in 13,170,000 bus. oats, 8,694,000 bus. rye, and a total of 61,072,000 bus. in all futures.

The largest volume since records have been kept by the administration was in the fiscal year 1929-30, when the volume in wheat in all markets was 19,606,790,000 bus., an average for one month of 1,630,000,000 bus., while, as stated in the foregoing, the November, 1942, volume for all markets was only 145,713,000 bus., or less than one-tenth of the 1929-30 monthly average volume.

Have Tires Inspected Before Jan. 15

Owners of commercial motor vehicles were reminded Dec. 12 to present their vehicles for tire inspection before Jan. 15.

A commercial motor vehicle may not be operated lawfully thereafter without an indorsement by an approved tire inspector on the certificate of necessity.

Contrary to instructions previously issued in the booklet furnished with the application blanks for Certificates of War Necessity, tire inspectors may charge for their inspection services, the ODT said, but the maximum price which they can charge has been set by OPA Price Regulation No. 165, as amended. This regulation sets the ceilings on service charges generally at the March, 1942, level.

Grain Shipping Books

Railroad Claim Blanks duplicating, three different books, five forms, 8½x11 in., \$2.25 each book, plus postage.

Shipping Notices duplicating, 50 originals of bond paper, 50 duplicates, press board cover, 5½x8½ inches, weight 8 ozs.; 2 sheets of carbon. Order 3SN. Single copy 75 cts.; three copies \$2.00, plus postage.

Shippers' Certificate of Weight duplicating, 75 originals of bond paper, 75 duplicates. Press board hinged back covers, three sheets of carbon, 4½x9¾ inches, weight 11 ozs. Order 89SWC. Single copy \$1.00; three copies \$2.75, plus postage.

Grain Shipping Ledger for keeping a complete record of 4,000 carloads. Facing pages are given to each firm to whom you ship and account is indexed. Book contains 80 double pages of ledger paper with 16-page index, size 10½x15¾ inches, well bound with black cloth covers and keratol back and corners. Weight, 4 lbs. Order Form 24. Price, \$3.85, plus postage.

Shippers Record Book is designed to save labor in handling grain shipping accounts and provides for a complete record of each car shipped. Its 80 double pages of ledger paper, size 9¼x12 inches, provide spaces for 2,320 carloads. Wide columns provide for the complete record of all important facts of each shipment. Bound in heavy black cloth with keratol back and corners. Shipping weight, 2½ lbs. Order Form 20. Price \$2.75 plus postage.

Sales, Shipments and Returns. Is designed to save time and prevent errors. The pages are used double; left hand pages are ruled for information regarding "Sales" and "Shipments"; right hand page for "Returns." Column headings provide spaces for complete records of each shipment on one line. Book contains 80 double pages of ledger paper, size 10¼x16 inches, with 8-page index. Spaces for recording 2,320 carloads. Bound in heavy gray canvas with keratol corners. Weight, 3¾ lbs. Order Form 14AA. Price \$3.45, plus postage.

Record of Cars Shipped facilitates keeping a complete record of cars of grain shipped from any station, or to any firm. It has column headings for Date Sold, Date Shipped, Car Number, Initials, To Whom Sold, Destination, Grain, Grade Sold. Their Inspection, Discount, Amount Freight, Our Weight Bushels, Destination Bushels, Over, Short, Price, Amount Freight, Other Charges, Remarks. Book contains 80 double pages of ledger paper, size 9¼x12 inches, with spaces for recording 2,320 carloads. Well bound in heavy black pebble cloth with red keratol back and corners. Shipping weight, 2½ lbs. Order Form 385. Price \$2.75, plus postage.

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Future of Soybean Products as a Feed

[Continued from page 519]

amino acid, methionine. We have been conscious of this methionine situation for some time in a properly cooked soybean oil meal and have hoped that some day we will be able to manufacture a soybean oil meal from varieties of soybeans that are higher in methionine content than the present milling varieties such as the Illini, Dunfield, etc.

The above demonstrations of protein quality have been confirmed in numerous feeding experiments with hogs and poultry. Here at the University of Minnesota they found a mixture of 50% soybean oil meal, 20% fish meal, 20% tankage, and 10% alfalfa leaf meal to be an excellent protein supplement for rapid gains of hogs fed in dry lot. Such a mixed protein supplement has given definitely superior results in rate of gain and economy of gain than tankage alone or any other single protein fed alone to hogs. The above mentioned University of Minnesota experiment was reported on by E. F. Ferrin, Johnson and Ferrin, of the University of Minnesota, report on their experiments relative to improving meat and bone scraps as a protein supplement for hogs. A ration consisting of ground corn, meat and bone scraps and salt fed to hogs in dry lot gave an average daily gain of 1.13 pounds and a feed requirement per 100 pounds of gain of 378.32 pounds. Another lot of pigs in the same experiment receiving a ration of ground corn, meat and bone scraps, one-half; soybean oil meal, one-half, and salt made 1.47 pounds of gain daily and required 353.47 pounds of total feed per 100 pounds of gain.

Purdue University has also been very active during the past five or six years experimenting with mixed protein supplements for hogs. They have found that a mixture containing 40 to 50% of soybean oil meal, 20% of fish meal, 20% of meat and bone scraps, 10% of cottonseed meal, 10% of linseed meal or 10% of alfalfa leaf meal, for dry lot, with a mineral mixture fed free choice, gave them far superior results with growing and fattening pigs than any single protein used alone. They have also demonstrated that soybean oil meal alone was a much more economical source of protein at present prices than tankage alone supplementing grains fed to sows and their litters. With corn at 80c per bushel, tankage at \$80 a ton, wheat or wheat middlings at \$35 a ton and a mineral mixture at 2c a pound, the soybean oil meal had a value of \$72.40 a ton.

I feel that the protein utilization values determined on feeds using baby chicks are applicable to practical feeding of poultry even though the utilization figures were determined by special laboratory technique. Nevertheless, I think you will be interested in the results of practical feeding tests conducted recently by the Maryland Agricultural Experiment Station. Some of these experiments are reported in their Bulletin No. A-6, issued November, 1941. These experimenters had better results with broilers with practical rations containing soybean oil meal as the principal source of protein than when their rations depended upon meat scraps as the principal source of protein. They did have some improvement, however, in feed utilization by the use of about 4% of fish meal along with a little better than 24% of soybean oil meal. These rations employed one of the distillation by-products in place of milk products as a source of the additional vitamin B-complex factors. Of course, these rations were complete in all other respects—at least, to the extent of meeting the known requirements of the various vitamins and minerals. Several other experiment stations have reported excellent results in poultry rations using very high levels of soybean oil meal to replace a very large part of the

animal proteins commonly used in these rations.

SOYBEANS FOR LIVESTOCK AND POULTRY—I find pretty good agreement on this subject among our various nutritional authorities. The feeding of soybeans to the animals and poultry I have referred to as critical animals is definitely discouraged as the protein quality of raw soybeans is decidedly too poor for satisfactory results. There is a second reason for discouraging the feeding of soybeans to hogs intended for the market and this is because soybeans in any appreciable quantity produce an objectionable soft pork.

Soybeans have been fed with pretty good results to matured ruminants, such as to dairy cows, matured beef cattle and sheep. With the younger ruminants, such as a growing calf or lamb, raw soybeans are just about as inferior as a source of protein as they are for hogs and poultry. In the case of these young growing ruminants, a properly cooked soybean oil meal is much preferred to raw soybeans as is the case with hogs and poultry.

I imagine that my statement discouraging the feeding of raw soybeans to fattening cattle will be contested by some of you. Therefore, I will proceed to qualify it. When I speak of young cattle or calves, I have in mind especially calves weighing from 370 to 550 pounds or better, such as are commonly placed in the feed lot to be fattened out for beef. These young cattle have a lot of growth to make before they reach maturity and I find lots of evidence indicating that these young cattle have just about as exacting demands for protein as is the case with animals and poultry having single stomachs. There are several university experiments on record to prove my point, but I think one of the best ones is reviewed in the Ohio Agricultural Experiment Station publication, the Bi-Monthly Bulletin, Vol. 26, May-June, 1941, No. 210. The title of this report is "Soybeans versus Soybean Oil Meal for Fattening Calves," page 127. The point I have made is brought out very emphatically in the following paragraph taken from this report:

"The gains of the sixteen steers in Lot 1 (fed soybeans) during the 140 day period amounted to 4,377 pounds; during the same period, the 16 steers in Lot 2 gained 4,872 pounds. The difference of 495 pounds of gain while feeding 3,114 pounds of soybean oil meal amounted to 318 pounds more gain while feeding a ton of soybean oil meal. On the basis of \$10 cattle, one could have given the soybeans away, paid \$30 per ton for soybean oil meal, and been just a shade better than even."

[To be continued]

Fiber Has Value in Feeding Ruminants

J. Axelsson in Biedermanns Zentralblatt makes a statistical analysis of published data and a critical consideration of current methods for the expression of feeding standards. The influence of crude fibre on the digestibility of organic matter and the utilization of digestible nutrients is considered in development of the thesis that there exists an optimum crude fibre content of rations for ruminants at which the efficiency of food utilization is maximum.

The use of metabolizable energy values is recommended for establishing feeding standards since the values are equivalent for all fresh or dry feeds under any conditions of feeding.

The use of malt by Canadian brewers has been limited since Nov. 1, 1942, to quantities in each succeeding 3 months not greater than used in the corresponding period of the preceding year.

Receiving Books

For Grain Buyers

Farmer's Deliveries. A convenient form for recording loads of grain received from farmers. Tare weight is entered immediately under gross to facilitate subtraction. Two hundred pages of linen ledger paper, ruled 20 lines to a page, thus accommodating 4,000 loads. Well bound in cloth, with keratol back and corners. Order Form 380. Weight 2 3/4 lbs. Price \$2.75, plus postage.

Receiving and Stock Book for keeping a record of each kind of grain received in separate columns, so buyer may easily determine total amount of any grain on hand. Size 9 1/2 x 11 1/4, 200 pages, with a capacity for 4000 loads. Well printed on linen ledger paper, bound in cloth with keratol back and corners. Order Form 321. Weight 2 3/4 lbs. Price \$2.75, plus postage.

Grain Scale Book, a combined Journal and Receiving book. Each man's grain is entered on his own page. Both debits and credits are posted to the ledger. Contains 252 numbered pages and 28 page index, size 10 1/2 x 15 1/2 inches, will accommodate 10,332 loads. Printed on linen ledger, bound in extra heavy black cloth covers, with keratol back and corners. Weight 5 lbs. Order Form 23. Price \$4.40, plus postage.

Grain Receiving Register is designed for recording the receipts of farmers' grain. Loads may be entered in consecutive order, or different sections of the book may be devoted to different kinds of grain. Book contains 200 pages of linen ledger paper, size 8 1/2 x 14 inches, each of which is ruled for 41 entries, giving a total capacity of 8200 wagon loads. Well printed and substantially bound in full canvas. Weight 8 lbs. Order Form 12AA. Price \$2.80, plus postage.

Duplicating Receiving Book, designed to facilitate the recording of loads received from farmers. Book contains 225 leaves, size 12 x 12 inches with 33 lines each, perforated down the middle; the inside half of the leaf remains in the book, and the outer half with the same ruling printed on the reverse side, folds back over the inside half with carbon between. It may also be used by line agents in making daily reports. Check bound with canvas back, nine sheets of carbon. Weight 4 1/2 lbs. Order Form 66. Price \$2.85, plus postage.

Grain Receiving Ledger, may be used first as a Stock Book by posting the receipts daily, weekly or monthly from some other portion of this book, or from any other scale book, giving a page to the grain handled; Second, as a patrons' ledger, by giving a full or half page to each patron; Third, pages may be used to enter each load of grain received in consecutive order under their respective headings. Contains 200 numbered pages with 44 lines to page, and a 28-page index, size 8 1/2 x 13 1/4, ruled with the usual column headings, including Debit and Credit columns. Printed on linen ledger paper and well bound in black cloth sides with keratol back and corners. Weight 2 1/4 lbs. Order Form 43. Price \$3.30, plus postage.

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Field Seeds

St. Louis, Mo.—For additional storage the Corneli Seed Co. has leased a building with 53,800 square feet of floor space in South 12th street.

Dallas, Tex.—The Geronimo Co-operative Seed Ass'n has been incorporated, without capital stock, by Arthur Rose, Herbert H. Koehler and R. E. Neumann.—P.J.P.

Tulsa, Okla.—The annual meeting of the Oklahoma Seedsmen's Ass'n, which was to have been held Jan. 13 and 14, has been postponed because of transportation conditions.

Owatonna, Minn.—Seed dealers of Steele County met Dec. 1 at the Hotel Owatonna to consider problems of seed merchandising, at the invitation of J. R. Gute, county agent.

Clinton, Ia.—Formal opening Jan. 8 of the new W. Atlee Burpee Seed Co. plant bids fair to be an outstanding event. The main feature of the three-day program will be a banquet in the Modernistic ballroom.

Portland, Ore.—Franklin W. Miller, 86, who established the first seed store in Portland 60 years ago, died at his home Dec. 5. He was born in Milwaukie, Ore. He sold his first store to the Portland Seed Co.—F.K.H.

Portland, Ore.—Twelve hundred carloads of Oregon-grown cover crop seed have been shipped to southern and east-central states under the government's 1942 seed purchase program. Considerable seed is left in storage to be shipped after being cleaned, tested and fumigated.—F.K.H.

Ralston, Neb.—The Washburn-Wilson Seed Co., of Moscow, Idaho, has bought a long-idle building and equipped it with machinery for packing and packaging seed stock and commercial peas and beans. Several carloads processed before arrival are stored in the basement in sacks.

Ogden, Utah.—The Utah Seed Council has elected Wm. M. Kasworm of the Utah Crop Improvement Ass'n pres., Roy Rasmussen of Ogden vice pres., and Victor P. Rasmussen of the State Department of Agriculture, sec'y. The meeting considered the necessity of introducing a bill for a new seed law at the 1943 session of the legislature.

Sheridan, Mont.—John H. Sheldon of Detroit has succeeded F. B. McGregor as field manager for the Ferry-Morse Seed Co. here. After 24 years in the seed business here Mr. McGregor will take a well earned vacation. The new seed plant of the company is nearing completion, and the machinery has been received for processing seed peas grown in Montana for the company.

Bloomington, Ill.—H. H. Miller died Dec. 10 while apparently recovering from an operation for the removal of an appendix that burst. He was born at Brome, Quebec, in 1878, was employed two years in the first Dominion seed laboratory, and then attended Ontario Agricultural College. He was assistant of Geo. H. Clark, who became Canadian Seed Commissioner. In 1905 he entered the employ of the Albert Dickinson Co., Chicago, and in 1917 became business manager of Funk Bros. Seed Co.

Portland, Ore.—Movement of alfalfa seed from Oregon farms this year has been a little slower than last year, and also slower than usual. By the end of October 62 per cent of the commercial crop had been sold.—F.K.H.

Washington, D. C.—Much hemp seed will be required for the 350,000 acres to be planted to grow the hemp required by the 71 mills to be operated by the C.C.C. under supervision of Samuel H. McCrory. Each plant will be situated so as to service 4,000 acres of hemp. Seed will be made available to growers at prices to be specified by the Commodity Credit Corporation, the amount to be deducted from payments for the crop next fall.

Reseeding of range lands, a new project in the Bitterroot valley of Montana, is attracting the study of different groups, as an aid to agricultural economics. According to the conservation committee a machine had been constructed to plant wheat grass and at the same time it tore out cheat grass on the depleted acres of the North Bitterroot. The crested wheat grass seed planted in the mineral soil after the cheat grass sod had been torn up, is nearly 100 per cent as to germination, according to H. W. Riek, soil conservationist.—F.K.H.

Eugene, Ore.—The annual meeting of Oregon Seed Growers will be held here Jan. 15 and 16. A program dealing largely with wartime adjustments is being prepared by Pres. Glen R. Ritchie, Forrest Grove, and Sec'y E. R. Jackman, Oregon State college. Among the special committees appointed were federal relationships committee—Joseph Harland, Richreall, chairman; Albert Girod, Salem, vice-chairman; Walter Leth, Dallas, sec'y; seed grading and marketing, Ernest DeLong, La Grande, Chairman; G. R. Hyslop, O. S. C. sec'y; cover crop seeds, George Berg, Canby, chairman; Clifford Smith, O. S. C. sec'y; grass seeds, Oscar Lee, Silverton, chairman; Edward Geary, Klamath Falls, vice-chairman; Floyd Mullen, Albany, Sec'y; legumes committee, Wallis Rice, Grants Pass, chairman; Ralph Brooke, Ontario, sec'y.—F.K.H.

Farmers Urged to Produce More Flax Seed

Minneapolis, Minn., Dec. 12.—The Secretary of Agriculture has stated, "Prices for the 1943 crop of flaxseed for oil will be supported at not less than \$2.70 per bushel, basis No. 1 flaxseed, at Minneapolis." Since this announcement was released farmers have shown a distinct holding tendency and receipts at Minneapolis and Duluth are very light, considering the fact that around 12,000,000 bus. are yet to be marketed from this year's northwestern crop.

The demand for flaxseed continues good and, further, there has been considerable investment buying of the Minneapolis May flaxseed future, which closed yesterday at \$2.62½, an advance of 9½ cents during the past week.

Another reason for this holding tendency on the part of flaxseed producers is that Congress is considering legislation to include labor costs in computing farm price parities which, if finally passed even over a Presidential veto, would boost the farm parity price of flaxseed from \$2.62 per bushel at present to around \$2.95. If the Secretary's plan of supporting prices at or above 90 per cent is continued and providing the present bill becomes law, the support price for No. 1 flaxseed at Minneapolis would be around \$2.80-\$2.85 per bushel.—Archer-Daniels-Midland Co.

Washington, D. C.—Importation of sesame seed has been prohibited without specific authorization of the Director General for Operations, in order to reserve seed crushing facilities on the West Coast for other seeds. The sesame seed has been coming from Mexico and Central America.

How Farmer Can Get Better Seed

There are several methods a farmer can adopt to secure better seed. One is to find a neighbor who has had his grain tested in the "Crop Testing Plan" and whose sample classified as "A." Such farmers for the most part have stocks in their bins of seed true-to-variety to a high degree. These stocks are called "Crop Testing Plan" "A" stocks. Such farmers are usually willing to make these stocks available to their neighbors at a very small premium—and some at no premium—over the market price.

Then, and always in addition to securing "Crop Testing Plan" "A" stocks, the farmer can purchase a few bushels of either registered or certified seed sealed in the sack. This seed is guaranteed for truthness-to-variety by both the Canadian Seed Growers Ass'n and by the Dominion Government. A few bushels of such excellent seed sown on a few acres of clean summer fallow will multiply itself about sixteen times on the average each year, and will soon give the farmer at slight cost sufficient true-to-variety seed to sow his entire acreage.

The agents of the companies associated with the "Crop Testing Plan" are supplied by the "Crop Testing Plan" with registered and certified seed of the leading recommended varieties produced by the leading seed growers. These seeds are made available to farmers at cost without any profit to the companies which support the "Crop Testing Plan."—Searle Grain Co.

During October 165,000 new federal employees were reported.

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ST. LOUIS, MISSOURI

Commercial Corn Hybrids Good in Forage Yield

In order to compare yields of hybrid corn for silage with those of open-pollinated corn and yields of certain Illinois hybrids for silage with those of commercial hybrids, investigations were made at the Illinois Agricultural Experiment Station from 1935 to 1941 inclusive.

In these investigations hybrid corn proved superior to open-pollinated corn in quantity and quality of forage produced. The yields were determined by two methods. The first consisted of field sampling: the plants in measured rows were counted and a definite proportion of them harvested. The weight and dry-matter content of the ear, stalk, and leaf portions of these samples were determined. The second method consisted of harvesting measured areas of each entry and then weighing and sampling the harvested crop for dry-matter content. The average results of the two methods were in close agreement.

Station Yellow Dent, an open-pollinated variety selected and developed by this Station and found by previous trials to be high yielding for both grain and forage, was used as the check entry from 1935 thru 1939. A commercial hybrid, Funk Hybrid G-94, was employed for this purpose in 1940 and 1941.

The various entries differed greatly from season to season in yields of dry matter, apparently because of weather conditions; but Station Yellow Dent had a lower percentage of ears and fewer tons of dry matter than most of the hybrids. It also showed more lodging, which probably was partly responsible for the lower yields and a smaller percentage of ears than the hybrids.

Iowa Seed Corn Supply Ample

There will be plenty of seed corn for 1943 planting, according to J. L. Robinson of the agricultural experiment station at Iowa State College.

The early frost in September caught some of the fields with a high moisture content and they were severely damaged while others were sufficiently developed to withstand the frost, according to Robinson.

Tests that have been run at the Iowa State College seed laboratory showed that there is a great deal of difference in the ability of various hybrids to withstand the cold weather. One of the other results of the tests was the difference in the percentage of germination when the ears contained a high moisture content and when they were dried to near the normal amount of moisture.

One lot of corn with a 30 per cent moisture content when collected in the field after the freeze tested only 33 per cent germination. When this same lot was dried to 17 per cent moisture, the percentage of germination jumped to 95. To illustrate the difference in the varieties of hybrids, another sample, with a 36 per cent moisture content jumped from a germination percentage of 74 to 96 when the moisture was brought down to 22 per cent.

These tests, according to R. H. Porter, head of the seed laboratory, prove that it is impossible to determine accurately the germinating qualities of all lots of corn when the moisture content is high. Porter says that probably most of Iowa's seed corn is now low in the percentage of moisture because of the good weather during the first part of October.

Another danger is evident this year, according to Dr. Porter. Diplodia and other dry rot diseases are widespread because of the large amount of moisture present in this year's corn. These diseases thrive best under damp conditions, and the danger from them decreases as the moisture content goes down. The organisms become inactive when the moisture content is below 15 per cent.

Misrepresentation of 'Certified' Seed

By W. A. DAVIDSON, senior marketing specialist of the Agricultural Marketing Administration, before the Crop Improvement Ass'n of Chicago.

There has been occasion to investigate nine cases of apparent violation of the Federal Seed Act involving seed represented to be certified. The outcome of one case is now pending in court; two are being considered from the standpoint of whether prosecution should be instituted; and four were terminated by warnings. The question of variety was involved in one case and tests indicated the complaint to be without justification. One case involved a kind of seed not now subject to the act.

In three of the cases the representation was falsely made because the seed was in no way subject to certification by an officially recognized seed certifying agency. In one case the seed was apparently a bulk of several lots which had been certified by officially recognized seed certifying agencies in two states. The bulk-ing was done without supervision; the seed was then offered as certified seed and bore only the labels of the dealer.

Four of the cases involved seed quite obviously produced in fields inspected by an officially recognized seed certifying agency. Three cases involved seed containing weed seeds that were noxious in the state into which the shipments were made. A thorough investigation of the certification procedure and the circumstances that led to the complaint was made. The certifying agency was informed of the circumstances in each case.

A review of these circumstances may prove helpful to members of the International Crop Improvement Ass'n in consideration of whether the certification procedure now followed is adequate to prevent, in so far as is feasible, a duplication of the circumstances.

FIELD INSPECTION of barley met the requirements. The grower submitted a sample presumed to be representative of the lot. The sample was tested and the grower was advised that the seed may be regarded as certified. The seed was sold to a local merchant who resold to the second party, who in turn shipped the seed into interstate commerce. No official certification labels were issued by the certifying agency.

The seed proved to contain noxious-weed seeds at the rate of 37 seeds per pound. The weed was noxious in the state of production as well as in the state into which the seed was shipped. The quantity was such as to make the seed below the standard required for certification. A warning was issued to the shipper. This could not add to the prestige of the certification agency. The matter was discussed fully with the certification officials who were most anxious to adopt procedures that would prevent a repetition.

CERTIFICATION labels were issued on two lots of soybeans on the basis of field inspection and laboratory tests on samples submitted by the grower. The bags were not sealed in either case and certified seed labels were attached by the grower. The seed on each instance was found to meet the certification standards but each contained weed seeds that were regarded as noxious in the state into which the seed was shipped. The rate of occurrence of these noxious-weed seeds was such as to not warrant drastic action under the Federal Seed Act but nevertheless in technical violation of the act.

In one instance the presence of the weed seeds was detected by the grower although not found in the sample submitted to the certifying agency. The grower shipped the seed in interstate commerce with the understanding that the consignee would have the right to reclean the seed or any portion of the seed that did not seem to be of sufficiently high purity. Appar-

ently no arrangement was made for supervision of such recleaning. The bags were not sealed.

In one instance the certifying agency provided the grower with the label which stated in general terms the quality of the seed and apparently furnished an additional label to be filled out by the grower and attached to the seed in the event it was shipped in interstate commerce. The grower in this instance failed to fill out the label to show the presence of the noxious weed seeds. It was indicated that he was not familiar with the noxious-weed seed requirements of the state into which the seed was shipped.

Violate Oklahoma Seed Law

Parks Yeats, state seed analyst, says that many Oklahoma dealers are violating the state pure seed laws.

The State and the A.A.A. requirements are different. The A.A.A., he said, requires that seed for wheat, rye, barley, oats and clover planting be 90 per cent pure. The state law requires that seed must show the percentage of noxious weeds or other seed. In addition if seed has more than 5 per cent of some other seed it can only be sold as mixed seed.

Yeats explained "The farmer goes to his seed dealer to get his grain seeds and the A.A.A. pays for the seed and then deducts the amount from the farmer's parity payment. The result is that the A.A.A. practically dictates where the farmer can buy his seed."

Yeats said that judging from the packages of seed sent into the seed laboratory by dealers, more than 60 per cent of the retailers are technically violating the state pure seed law, by mislabeling their seeds.

Inflation to Combat Inflation

[Continued from page 513]

000 as claimed by the OPA or twice that amount, as estimated by others, is beside the point. In a year like this, when the lowly employee receiving down to as little as \$7 per week is to contribute his bit via the income tax to the cost of conducting the war, it certainly is no time for any additions to the already tremendous amount of non-essential and non-defense spending.

The Senate is now committed to a searching investigation involving all of the operations of the Commodity Credit Corporation with respect to loans, subsidies, and all the various phases of its work. A word to your Senator can do much to eradicate the cause of many of the abuses which have crept into this gigantic scheme for the regimentation of the farmer.

WEEDS and Weed Seeds

Your farmer patrons, yourself, in fact, everyone interested in the betterment of agriculture, will welcome this new book. Its 76 pages, 6x9, contain information, with illustrations of Noxious Weeds, Lawn Weeds, Poisonous Plants and aids dealers to identify noxious weed seeds. Nothing like it ever before published. Price \$1.00 plus postage.

Grain & Feed Journals
Consolidated

327 So. La Salle St. Chicago, Ill.

Supply Trade

Chicago, Ill.—December, 1942, marks the 21st anniversary of the establishment of the Landis Award Employers Ass'n, to preserve freedom in the labor market for the building construction industry.

Wichita, Kan.—A. C. Rynders, the popular and widely known owner of the White Star Co., jobbers of grain elevator and feed mill machinery, because of ill health has sold his company to E. K. Archer and H. F. Martin, who will continue it under the name of the White Star Mch. & Supply Co.

Washington, D. C.—The exemption of general industrial equipment for certain repair and maintenance purposes from the control over distribution does not apply to spare parts for new equipment, it was made clear today by Interpretation No. 2 of Order L-123. The interpretation explains that equipment is considered "new" when it has not been delivered to a person acquiring it for use. The interpretation also points out that the exemption is intended to provide for the repair and maintenance of any existing equipment which has been delivered for use, including equipment delivered prior to the issuance of the order.

Washington, D. C.—Purchase orders for necessary repair and maintenance parts for many items of general industrial equipment must be accompanied by a certificate, reciting the nature of the purchase, in accordance with an amended order issued Nov. 23 by the Director General for Operations. The amended order (Limitation Order L-123, as amended) also clarifies some of the definitions of specific items of equipment included in List A, attached to the original order (L-123). It further adds to the list a number of items, among them safety switches, industrial dust collectors, circuit breakers, magnets, motor generator sets and certain other items related to motor and control equipment which were affected by limitations imposed by the original order.

The selling price of a used machine, one of the factors in the definition of "critical industrial machinery" as given in General Limitation Order L-83, amended May 18, 1942, was clarified by Interpretation No. 1 of the order, issued Dec. 17, by the Director General for Operations. The order provides that the value of a new or used critical industrial machine shall be its selling price. Interpretation No. 1 clarifies the term "selling price" by pointing out that in the case of a used machine the term includes not only the selling price of the used machine, but also the cost of such repairing or reconditioning as is necessary to make the machine an effective instrument. Thus the sale of a broken-down machine at a price below the limitation established by the order, followed by related repairing or reconditioning, does not place the sale beyond the scope of the Order L-83.

Minneapolis, Minn.—The McKenzie-Hague-Simmons Co. has recently been formed to carry on the work of the McKenzie-Hague Co., designers and builders of grain elevators and allied buildings. Regarding the new company F. L. Hague, its president, says: "This new firm is made up of substantially the same working force as the old McKenzie-Hague Co., and it is intended that it will continue operating in the same line of work and with the same established policies and interest in good workmanship as has been the case of the old company. The purpose of the new organization was to provide for more active use of certain men who have been with the McKenzie-Hague Co. for a considerable length of time, and to provide these men with a more substantial interest in the work." Other officers of the company are F. W. Bennisson, treas.; F. S. Simmons, mgr. and vice-pres.; W. R. Kohler, sec'y.

Establishing a Right to Build

A grain elevator that burns may be rebuilt promptly with consent of the War Production Board when a simple recording procedure is followed to establish the right to purchase lumber, and machinery, according to explanations set forth by Erskine Wilder, of the Chicago office of the priorities division of W.P.B.

Mr. Wilder points out that W.P.B. Conservation Order L-41, effective last Dec. 5, requires permission of W.P.B. for any construction in the grain elevator classification that costs \$1,000 or more.

The procedure for obtaining permission, he continued, is first to visit the county war board, and fill out and file a Form PD-200, which is an application for priority assistance, and an application for authority to begin construction.

If your elevator burns, do not delay taking first move to obtain permit. Conservation Order L-41 gives the county war board authority to approve proposed construction which is "to reconstruct or restore agricultural construction damaged or destroyed after Sept. 7, 1942, by fire, flood, tornado, earthquake, act of God, or the public enemy, where the immediate reconstruction . . . is . . . essential to the agricultural program, provided that within two weeks of such determination Form PD-200 is filed." So lose no time between getting approval of the county war board and filling out and filing Form PD-200. The right to file such form may lapse after the two week period.

PD-200 is a forbidding form. Part of its forbidding appearance grows out of its four sheets. But carbons go between the sheets. The form is filled out in quadruplicate. There are really only two sides to fill out. Even this is not as bad as it sounds, for well over half of the space in the form is to be filled out only by those who wish to construct facilities for manufacturing.

About all a country elevator operator has to show in this form is a list of the construction materials and machinery required, and the answers to a dozen questions describing the project, and explaining the necessity for construction. A sheet of instructions accompanies each form, to facilitate answering the questions, and explaining how to use the form (if priority assistance is granted) and its certification to obtain the necessary construction materials.

That is about all there is to it. The application is sent by the County War Board to Washington. Once W.P.B.'s permission for construction is granted, the applicant can go ahead with his proposed construction. If changes in design are made later, or if some items are overlooked in setting up the original list of materials needed, supplementary lists can be filled out and added, and the project completed.

Greatest concern of the elevator operator planning reconstruction of destroyed property is machinery. Lumber is critical, too, but W.P.B. Conservation Order M-208 automatically gives an elevator operator an A-1-a rating for purchase of his lumber requirements. Paragraph (iii) under section 2 of List B therein specifically provides for allowance of this rating for "buildings or structures or parts thereof, to replace those destroyed or damaged by fire, flood, earthquake, tornado, act of God, or the public enemy." Paragraph (iv) further provides this rating for "buildings or structures required for storage of agricultural products." The only current higher rating is AA-2x, which is set up for government or government agency orders, and for the supply houses filling such orders.

Purchase of lumber under the A-1-a rating requires only signing of a statement on the order given to the lumberman, specifying that the lumber will be used in accordance with its purchase rating.

W.P.B. has an idea that existing grain handling and shipping facilities will do their work efficiently only if kept in good repair. It costs less to maintain facilities than to replace them later. For this reason W.P.B. allows maintenance and repair costs without forms and applications for permits. Purchases for maintenance and repairs may be made on an A-10 rating by simply signing a statement stamped or written on the order, showing purchase is made on an A-10 rating under order P-100.

Do not let the forms scare you. They are designed primarily to give the W.P.B. the information necessary for allocation of short supplies of materials and to give necessary construction, maintenance and repairs a clear track over unnecessary work. Without such control over materials many wasteful and unnecessary new projects would be started to the great detriment of existing facilities and the nation's war effort.



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V-Belt Drives Need Watching

By C. M. PARK, Chief Engineer, Mill Mutual Fire Prevention Bureau

Scarcely a week passes without the report of a fire in a grain or milling plant caused by a V-belt drive, and in the last few months, the frequency of such reports has been increasing. Typical is a report which illustrates the fire danger associated with the failure of this type of drive, to-wit:

"The leg became choked, and before they could shut down the motor, the V-belts on the head drive caught fire and dropped into the dust in the cupola."

Another report received a few days earlier: "The elevator manager noticed the leg belt had stopped and the motor was still running. He shut off the motor, went to the cupola on the manlift, and found the V-belts burning on the pulleys."

These are typical cases of V-belt fires that are occurring every week. Some are put out before any serious damage has been done outside of the drive itself, but in many cases, the fire has gotten out of control and total destruction of the property has resulted.

Under present conditions, the loss of an elevator head drive or a sheller drive is bad enough, because it may be days or even weeks before a new set of belts can be obtained. Where a fire gets out of control, however, and the entire property is destroyed, it is a better than even bet that materials and equipment for rebuilding will not be obtainable.

Why V-belts Catch Fire

V-belts catch fire because they slip in their sheaves. The reasons why excessive belt slippage may occur will usually be found in the following list:

- Drive inadequate for the load.
- Loss of belt tension because of wear.
- Failure to maintain proper belt tension.
- Operation with less than full number of belts.
- Mechanical damage to one or more belts.
- Oil, grease or moisture on belts.

The first three reasons are by far the most common. Every plant operator should investigate these if he wants to prevent loss.

Inadequate Design

Inadequacy of load capacity has, without question, been the most serious shortcoming of V-belt drives in grain and milling plants. In almost every case, insufficient load capacity in the design of a V-belt drive is the result of incompetence of the designer, or of lack of knowledge concerning the load to which the drive may be subjected.

Failures of V-belt drives, and resulting fires, occur most frequently in elevator head drives, sheller drives, and drives for hammer mill grinders. With each of these drives, the driven equipment may, and frequently does, choke down and stall. It is apparent, therefore, that choking and stalling of equipment is an important factor in the failure of such drives. The fact designers have disregarded this factor is one of the main reasons for the frequency of fires.

Where the driven equipment may choke and stall it is of primary importance that the drive have sufficient capacity to stall the driving motor. Otherwise, the motor sheave will continue to turn after the belts have stopped, and the heat generated by friction under such conditions will ignite the belts long before the overload protective device for the motor will operate. If the motor stalls, its overload protective device or its branch circuit fuses will cut off the current before the motor itself is damaged, but if the motor does not stall, the belts will be on fire almost immediately.

A characteristic of squirrel cage motors, and of some other types of motor, is their ability to pull from 200 to 400 per cent of their full

load rating after they get up to speed. With the ordinary squirrel cage motor, a much greater load is required to stall it after it gets up to speed than would be required to prevent it from starting in the first place, and a drive that might prevent a motor from starting against a choked load might be entirely inadequate to stop the motor if the drive equipment choked down and stalled. For a squirrel cage motor, the drive should be capable of handling at least 250 per cent of the full load horsepower rating of the motor if the driven equipment is of a type that may choke down and stall.

In the case of an elevator head drive, it is very important that the driving motor be stalled if the cup belt is stopped due to a choke in the boot or for any other reason. This means that the rating of the driving motor should not be sufficient to cause the elevator head-pulley to slip in the cup belt, and the design of the V-belt drive from the head-pulley to the motor should be adequate to stall the motor in case the head-pulley is stopped.

Engineering Service Department Bulletin VB-200 published by the Mill Mutual Fire Prevention Bureau covers the design and operation of V-belt drives and copies will be provided without cost for use by operators of such plants. With this bulletin, the design of a V-belt drive can be readily checked.

Belt Tension

The maintenance of proper belt tension is highly important if a V-belt drive is to give satisfactory service. When a new set of belts is installed, the tension should be re-adjusted after the first 30 or 40 hours of operation to compensate for the initial stretch of the belts and the initial wearing in to the grooves of the sheaves. From then on, the tension should be checked at least every two weeks, and proper adjustments made as needed.

It should be pointed out, however, that increasing the belt tension will not increase the load capacity of the drive, and cannot be used as a substitute for adequate capacity. Any attempt to increase the capacity of a drive by increasing the belt tension will simply increase the rate of wear on the belts, and will not provide any protection against belt failure and fire in case a piece of driven equipment stalls.

Missing Belts

Numerous cases have been found where one or more belts in a drive have failed, and where the drive is being operated with the remaining belts. This practice constitutes an invitation to belt slippage and fire. When one or two

belts in a multiple belt drive fail, that is usually an indication that the drive did not have sufficient capacity for the load in the first place. Placing the entire load on the remaining belts increases the overload, and complete failure is likely to occur within a short time.

Damaged Belts

Occasionally one or more belts in a drive will be damaged and the damage may reduce the load carrying capacity. Sometimes a belt may be seriously damaged in installation by forcing it over the edge of the groove without having slacked off the belt tension adjustment sufficiently. A belt in which the load carrying capacity has been impaired is little better than no belt at all. Where one belt of a set is damaged, the only satisfactory and safe procedure is to replace the entire set.

Foreign Material

Oil, grease or moisture on the sides of the belts or of the grooves in the sheaves tends to reduce the co-efficient of friction between belts and sheaves, and leads to excessive slippage.

Excessive slippage means excessive heat and excessive wear, and is probably the beginning of the end for the set of belts involved. Oil and grease can be removed by carefully wiping the belts and the grooves with a rag moistened with carbon tetrachloride. Moisture can be removed by careful wiping and drying. In any case, the drive should be protected from further exposure.

Dirt and dust, if of an abrasive nature, will cause excessive wear in both belts and sheaves. Wear shortens the life of the belts, and necessitates frequent adjustment of belt tension. Drives should be protected from stones or pieces of corn cob. If such an object should be carried around a sheave under a belt, the usefulness of the belt would probably be destroyed.

Summary

V-belt drives may be depended on to give long and efficient service if they are properly designed and installed and properly maintained. If improperly designed or improperly maintained, they are sure to cause trouble, and likely to start a fire.

Belt tension should be checked frequently, and should be adjusted when necessary. Insufficient tension will cause rapid wear of belts and will lead to excessive slippage, belt failure, and possible fire. Excessive belt tension will also cause rapid wear of belts, and may cause damage to the internal belt structure.

It is useless to attempt to increase the load capacity of a drive by increasing the belt tension. If a drive is inadequate to handle its load with normal tension on the belts, it should be replaced with a properly designed drive before it goes to pieces and starts a fire. Never operate a V-belt drive with less than the full number of belts, nor with one or more damaged belts. Trouble is almost sure to result.

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by

F. B. Morrison

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327 S. La Salle St. Chicago, Ill.

Feedstuffs

The C.C.C. on Dec. 8 ordered corn belt soybean processors to fill December and January contracts with eastern and southern purchasers with meal bought from or supplied by crushers in those areas.

St. Louis, Mo.—At the meeting Dec 8 and 9 of the American Dehydrators Ass'n data for the establishment of ceiling prices were given Max Cohn of the OPA. Dr. R. M. Bethke spoke on the importance of alfalfa meal in feeding and H. W. Titus of the U.S.D.A. stressed the need for more alfalfa meal.

Chicago, Ill.—There has been an excellent buying interest for soybean meal, but all of the local processors are out of the market for the time being and no soybean meal was offered and no trading was observed during the past week. Production was reported to be at capacity with mills considerably behind on orders previously booked. A nominal processors' ceiling price for December soybean meal at Chicago would be \$38.60, sacked.—U. S. D. A.

Lincoln, Neb.—A conference of feed dealers, mixers and farmers was held one evening recently at the College of Agriculture. H. G. Gould, assistant director of the agricultural extension service, said many farmers and others have reported their inability to buy protein supplements either in the unmixed or commercially mixed form. Some dealers are reported having trouble in getting supplies also. The entire problem was surveyed in an effort to see if anything can be done.

Decatur, Ill.—During the past three years, there has been a sharp increase in the utilization of feed grains as livestock production has expanded to meet growing domestic and lend-lease requirements. Much soybean and linseed meal is being purchased by feed mixers to supplement limited supplies of tankage, meat scraps, and fish meal, as well as to meet the increased demand for manufactured feeds. Supplies of copra cake and meal are practically negligible, and fish meal production is running about one-third less than last year.—Baldwin Elevator Co.

Winchester, Ind.—Our inability to get high protein concentrates is becoming very serious. Most every day someone is in with a substitute which is supposed to be better than the original but we have heard of some rather disastrous results feeding some of these so-called just as good substitutes. After all in feeding poultry and livestock there is just nothing that can replace good fish meal and milk products, in our opinion. Washington would be terribly concerned if they were having ten to fifteen cargos of meat products sunk every day in the Atlantic it amounts to the same thing when we run short of the proper ingredients to make pork and beef.—C. C. Barnes, exe. v.p. Goodrich Bros. Co.

Government Asks 15 Per Cent Increase in Pig Crop

Claude Wickard, sec'y of agriculture, has revised upward previously established 1943 hog goals and at the same time announced a program designed to support hog prices until Sept. 30, 1944.

The revised 1943 goal calls for an increase of 15 per cent over this year's record pig crop. Two months earlier the secretary asked farmers to increase their 1943 spring farrowings by 10 per cent. If realized, the new goal will result in a 1943 pig crop, spring and fall farrowings combined, of 121 million head.

If prices of live hogs drop unreasonably the Agricultural Marketing Administration in order

to protect the Government's pledge to farmers in the interest of greater production, will buy live hogs at Chicago and arrange for their processing on a custom basis.

Feed Licensing in Ohio

W. W. Cummings, sec'y of the Ohio Grain, Mill & Feed Dealers Ass'n urges dealers to aid the state in licensing feed manufacturers, as the Ohio feedstuffs law holds the manufacturer and dealer jointly responsible for license. "It has been the policy of the Ohio Department of Feeds and Fertilizers to exhaust every means to obtain the license from the manufacturer before placing this responsibility on the dealer, and they have enjoyed splendid co-operation on the matter of obtaining licenses from out-of-state manufacturers.

"It is unfair for the licensed dealer for the unlicensed feeds to be offered for sale by competitors. You can be of great assistance in asking the salesman if his product is licensed. If it is not, why not patronize the firm who does license his feed in Ohio? You will be doing yourself and others a great favor. "A list of manufacturers who have not licensed their feed in Ohio will be gladly furnished you by this office or Mr. Stanley Laybourne, Chief, Division of Plant Industry, State Office Building, Columbus, O."

Feed Millers in California Cannot Obtain Alfalfa Meal

The California State Director of Agriculture, Wm. J. Cecil, at present in Washington, has discussed meal ceiling problems with John K. Westberg, associate price executive in OPA. Officials Charles Kenney, acting head of the Feed Unit, and Max Cohen of that Division, are now working on national survey with regional OPA officials. An investigator is now in the Los Angeles area checking on meal processing costs, etc.

I. J. Strommes, sec'y of the California Hay, Grain & Feed Dealers Ass'n, reports that "the situation is more serious every day in California where feed millers cannot obtain alfalfa meal for balanced livestock feeds. John D. Porter, AMA, has found it impossible to make purchases of meal for public or war agencies. Just recently, OPA refused the appeal by California and Arizona meal millers for a custom milling ceiling so that meal production could proceed.

"Ray Sence, chairman of our Alfalfa Meal Division, G. G. Steere, and C. E. Patterson, vice-chairmen, have been working with OPA officials for a solution. The latter has advised OPA in San Francisco that it would be impossible for OPA to make a ceiling to protect alfalfa meal millers this year, and the only solution would be to make a temporary arrangement with a ceiling on custom grinding until June 1, 1943.

"It will be impossible for OPA to keep up with rapidly advancing hay prices in trying to determine a ceiling on alfalfa meal. Probably today they are working on a price that is below the present market on hay.

"It appears discriminatory that some meal millers previously doing custom grinding may continue while others are prohibited from doing so and thereby relieving the meal situation. We have hopes that Mr. Westberg, and associates will decide on some emergency relief in the next few days, while continuing on the long time national meal ceiling hunt."

Rationing Soybean Meal

The Commodity Credit corporation, in charge of the soybean processing and marketing program, is resisting as impracticable two proposals aimed at shunting a major portion of protein meal from mixed feed plants to farmers. These are: Rationing, or a flat requirement that processors set aside a certain percentage of their by-product meal for direct farmer use.

AMA has suggested rationing, pointing out that a sizable quantity of meal is wanted for lend-lease and that it cannot buy any. It has urged CCC to act under its contracts with southern processors to secure as much meal as possible and apportion it in part to farmers and in part to lend-lease.

Agency officials, however, argue that the quantity to be obtained in this way now, would have to be spread so thin over the country it would be uneconomic to attempt it, in addition to further complicating transportation.

Agriculture department officials insist the mixed feeds manufacturers are buying up all the meal, and that jobbers will sell only to these firms because they can get higher prices for meal entering mixed feeds. These feeds, containing some grain, are exempt from price control.

Concentrates in Dairy Rations

At the Hawaiian Agr. Exp. Station in double-reversal feeding trials comparing cottonseed meal and soybean oil cake meal, the cottonseed meal produced slightly less total weight of milk and butterfat than the soybean-oil meal. When dried yeast prepared from cane molasses was compared with soybean-oil cake meal, the former ration was less palatable and yielded approximately 14% less weight of milk in 12 weeks. Roughage consumption was 8.3% higher when the yeast feed was fed. For growing heifers the yeast feed proved entirely satisfactory. The yeast contained 40-42% protein.

Continued Scarcity of Feed Concentrates

No stocks of oilseed cakes and meals are available at Kansas City and quotations are of little value to the consuming trade. Such quotations as are available are either strictly nominal or at ceiling levels.

At Minneapolis there were still no actual quotations available on oilseed meals for shipment during the winter months. The only bona-fide quotations on linseed meal were \$40.50 per ton. Minneapolis, in sacks, for May, 1943, and forward delivery. The nominal market on linseed meal for December and January shipment is called \$43 per-ton but no firm offerings are made. The same situation holds true on soybean meal, the nominal quotations being arrived at by calculating the truck freight rate to Minneapolis on lots which are available in quantities at interior crushing plants.

Kansas City manufacturers of gluten feed and meal are sold up and the entire output is being applied on previously contracted bookings and then only on a prorated basis at ceiling prices. Only very limited stocks of hominy are available, but because of the shortage of other ingredients the demand is not pressing.

Weather conditions and shortage of labor continue to hamper the production of suncured alfalfa meal. Central western meal mills were making only limited amounts and no additional bookings for deferred shipment were accepted. Kansas City mills were turning out only a limited amount of No. 1 fine ground meal which was being applied on old orders at ceiling prices.

Tankage and meat scraps prices are at ceiling levels, with the entire output being applied on previously contracted orders on a prorated basis. Some new orders are being booked for 60 to 90-day shipment.—*Kansas City Grain Market Review.*

Program N-W Retail Feed Ass'n

The Northwest Retail Feed Ass'n will hold its 11th annual convention at the Hotel Nicollet, Minneapolis, Minn., Jan. 11 and 12. The speakers are:

F. Peavey Heffelfinger, district director of the W.P.B.

Chas. Stickney, chairman of the Minnesota state A.A.A. committee.

Frank Corcoran, district manager of the O.D.T.

Tom G. Dyer, manager of the commercial feed department of the Russell-Miller Milling Co., who will tell what he would do now as a retail feed dealer.

Dr. W. A. Billings, agricultural extension department poultry specialist, on a Common-sense Poultry Sanitation Program.

Paul E. Miller, director of the Minnesota agricultural extension department, on A Co-operative Educational Program with Fred Dealers.

John K. Westberg, of the O.P.A. at Washington, on the price ceilings in effect on oil meals and cakes.

Either Ray Bowden or Samuel Rice of the Grain & Feed Dealers National Ass'n are expected to be present.

Edward J. Thyne, lieutenant-governor elect, will address the banqueters. He is expected to take over the office of governor.

The entertainment will include a free cocktail party Monday evening, followed by the banquet and an old-time dance.

Margin for Alfalfa Grinding

Alfred T. Twigg, O.P.A. director at San Francisco, Cal., on Dec. 7 ruled that alfalfa millers may grind hay for customers at the margins specified in the ruling, or may obtain hay for the customers at no fee; but that they may not sell their own hay to the customer and then add the processing charge.



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Poultry Feeds and Feeding

Shelby, O.—Carl R. Daugherty and W. H. Guiss, trading as Co-operative Breeding & Hatching Co. have agreed with the Federal Trade Commission to cease representing that chicks sold by them have the strain of prize-winning or champion poultry.

Increased Sales of Feed in Delaware

During the calendar year 1941, there were 1,431 brands of feeding stuffs, 450 brands of fertilizer and 5 new brands of lime registered with the State Board of Agriculture. The tonnage report on these materials shows 260,370.1 tons of feeding stuffs sold in Delaware (an increase of 95,676.4 tons over 1940), 43,045.2 tons of fertilizer, and 22,413.6 tons of lime.

The feed tonnage tax jumped from \$16,469.37 in 1940-41 to \$26,037.01 in the fiscal year ending June 30, 1942.

Chick Output Larger

The U.S.D.A. reports that in October 23,000,000 chicks were produced by commercial hatcheries in the United States. This output was 12 per cent larger than in October last year and 54 per cent larger than the output during that month in 1940. With good weather for producing hatching eggs, the number of chicks hatched by commercial hatcheries will increase until the seasonal peak is reached next April.

Because the chicken-feed price ratio has been favorable for producers, a record strong demand for chicks has resulted. The number of eggs set in October was 7 per cent larger than a year earlier, and on Nov. 1 about 18 per cent more chicks were booked for later delivery than were so booked a year ago.

The number of chicks hatched by commercial hatcheries during the first 10 months of this year was 13 per cent larger than in the corresponding period of 1941. In the last few months of the year, chicks hatched by commercial hatcheries are used primarily for the specialized production of broilers and fryers.

Laying Mash Without Scarce Products

Dr. D. C. Kennard, in charge of poultry investigations, Ohio Agricultural Experiment Station recommends the following emergency mash mixtures without milk, meat or fish by-products for laying hens. Dr. Kennard emphasizes that these mixtures are recommended for use only "when the poultryman or feed merchant cannot obtain animal products which should be used to supplement soybean oil meal for best results."

	No. 1	No. 2
Yellow corn, coarsely ground.....	37	17
Wheat middlings	15	15
Wheat bran	10	10
Soybean oil meal	25	40
Alfalfa leaf meal (dehydrated).....	8	10
Bone meal (special steamed).....	2	4
Salt	1	1
Oyster shells (chick size)	2	3
Vitamin D feeding oil (400 AOAC).....	0.5	0.7

Formula No. 1 is a 19 per cent protein mash which may be used as a chick starter, or as a laying ration to be supplemented with about an equal amount of whole grain.

Formula No. 2, a 24 per cent protein mash, is preferable for feeding layers with the free choice of whole corn and whole oats. The mash, prepared from either of these formulas, cannot be expected to give as satisfactory results as if they contained fish meal or meat scraps and milk products, especially for the production of hatching eggs.

A sudden change of feed when layers are in a high rate of production may, in itself, cause a loss of eggs (and layers, too) even if the new feed is as good or better than the old.

Should it be necessary to make a change, it should, if possible, be made gradually over a period of 2 to 3 weeks' time.

Function of Minerals in Nutrition

By G. BOHSTEDT, University of Wisconsin

Too often we are apt to think of minerals in nutrition only in connection with the growth of bones that are made up largely of calcium and phosphorus. This is only part of the function of these two and other minerals in the ration, altho it is an important function. Surely an animal is limited in size and ruggedness by its skeletal frame. No animal will be rated excellent if it shows a sway back, or stands on buck knees or bowlegs, or on broken down pasterns. Indeed, minerals play a part in the structure of the body so far as bones are concerned.

But minerals go far beyond that function. Minerals play a major part in all life processes: In respiration—the ability of the blood by means of sodium bicarbonate to carry carbon dioxide to the lungs for aeration; in blood circulation—every heart beat is conditioned by the presence in proper proportions of calcium, potassium, and sodium; and in digestion—salt furnishes chlorine for the digestive juice in the stomach, and furnishes sodium for the bile that aids digestion in the intestine. This is only the briefest kind of a list of vital functions that are served by minerals. Minerals are active in every tissue of the body, besides bones, including blood and lymph, muscular tissue, glands and other vital organs, nerves, brain, hair, hide, hoof, and horn.

There are 13 minerals that have been found necessary for animal life, these being: Calcium, phosphorus, potassium, sodium, chlorine, magnesium, sulphur, iron, iodine, copper, manganese, zinc, and cobalt. The first two minerals are present in largest amounts in the body and in all livestock products. So little of the last five elements is necessary for life, and so little of them is found in the body and in rations, that they are referred to as the trace elements. For instance, one part of iodine in 5,000 parts of salt, which salt makes up less than one-half per cent of the entire ration, may make the difference between health and disease. It may make the difference between the birth of normal animals and those suffering from big neck, or hairlessness in the case of pigs.

Years ago, about the only mineral that we consciously fed to livestock on the farm was salt. Most of us remember that chore, perhaps those trips on Sunday mornings carrying a pailful of salt to the cattle on pasture. Salt is easily dissolved in water, as we know, and we can draw the salt out of a cured ham by soaking it in water over night. So it is seen that what salt may originally have been present in the soil, has many generations ago been leached out of it. Hence the need for feeding this important mineral to which, as stated, frequently iodine is added for further safeguarding the health of man and beast in certain regions of the country and the world that are deficient in iodine. Iodine compounds, too, are rather easily lost out of the soil. Thus we have the region of the Great Lakes and some of the northwest states that are low in iodine as evidenced by the symptoms mentioned. We then recommend feeding iodine in some form, preferably by way of iodized salt.

Might other minerals have been lost out of the soil, especially considering that land has been cropped for generations, perhaps without adequate fertilization, and where crops are known to remove minerals from the soil, as well as does leaching? This is a legitimate question, especially in view of the further consideration that modern livestock has been bred to a higher level of production, or for more rapid growth and therefore may make keener demands upon their rations.

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Nutritional Requirements of Poultry

By C. A. ELVEHJEM of the Department of Biochemistry, College of Agriculture, University of Wisconsin at Ohio Animal Nutrition Conference.
[Continued from page 485 of Dec. 9th Number]

The values given in this table are in general minimum figures obtained from carefully controlled experimental trials. In some cases the levels may need to be increased within reasonable limits to meet the rigors of practical feeding conditions.

AMINO ACIDS.—It is immediately evident that considerable care needs to be taken to insure a proper intake of essential amino acids. Casein when fed at 18% of the ration fails to supply sufficient quantities of several of the amino acids. A combination of milk proteins and those from several cereal grains may be satisfactory, but animal proteins give greater assurance of completeness. Thus tankage may be of definite significance as far as glycine, arginine and cystine are concerned. We have recently found that finely ground hog hoofs supplement casein very well for the growing chick and work remarkably well when used as the sole source of protein. It is clear from the ration used by Cravens that hens will produce eggs of high hatchability when 18% casein is supplemented with 5% of gelatin. Apparently the hen does not need the extra cystine which is needed by the chick when fed a similar ration. There is some discrepancy about glycine since the California workers claim that 2% of glycine is toxic to the chick and we find that optimum growth is not obtained until the glycine level approaches 2% of the ration. The recent paper by Almquist and co-workers is most interesting since it shows that heated soybean protein is slightly deficient in methionine at the 20% level but is complete in respect to all the other amino acids required by the chick. It is well to add that the amino acid content of the eggs remains very constant in spite of any change in the composition of the diet. Thus the hen is like the cow in that a normal product is produced or else the production is curtailed.

The figures given for vitamin A show quite a range, due largely to the fact that older chicks and fast growing chicks require more carotene than slow growing ones. The higher value for chicks is similar to the value of 1,800 I.U. per pound of ration, a figure now rather widely used for chick rations. An extra supply of a vitamin as labile as vitamin A is certainly not amiss. Rubin, Bird and De Volt have shown that it takes at least 150 micrograms of carotene (250 I.U.) per 100 grams of ration, to allow storage of vitamin A in the liver. If 5% alfalfa is used as the source of carotene it must contain at least 30 micrograms per gram. Alfalfa products are known to vary from 9 to 300 micrograms per gram. If yellow corn contains 7 I.U. per gram, 25% of corn is needed.

The values given for hens are a little lower than the figure of 3,000 I.U. per pound now generally recommended for egg production rations. Sherwood and Fraps have recommended values as high as 1,000 I.U. per 100 grams for hens producing eggs for hatching. The figures for vitamin D are self-explanatory. Some extra supply of vitamin D must be added, and if we accept 30 I.U. per 100 grams for chicks a 95 U.S.P. unit cod liver oil must be used at a level of $\frac{1}{3}\%$.

THE VITAMIN E REQUIREMENT of poultry is not settled. I believe there is no question about the actual requirement for vitamin E in the normal metabolism of birds, but the amount needed in the diet depends upon several factors. The highest requirement I have found is that given by Dam and co-workers, namely, 0.4 mg of di- α -tocopherol acetate per chick per week. This value may not appear too high when compared with the requirement of .32 to 1.0 mg per K for the protection against muscle dystrophy in rabbits. However, in both

cases diets having a destructive action on vitamin E were used.

THE VITAMIN K requirement of growing chicks is rather difficult to establish since the amount needed decreases rapidly as the chicks grow older. The value for hens I think is rather definitely established and can readily be supplied by 1% of dried grass, or 2% of alfalfa leaf meal.

The earlier values of .1 mg of thiamin per 100 grams ration obtained from studies with autoclaved rations are probably a little low since not all of the thiamin was destroyed in the basal ration. Recent work with synthetic rations indicates that the correct figure is close to .15 mg. There is no great difficulty in meeting this requirement since most grains carry

TABLE I Nutritional Requirements of Chickens		
	Amount per 100 grams of ration	
	Chicks	Hens
Total protein ..	18-20 gm	15-16 gm
Glycine	1-2 gm	
Arginine	1 gm	
Methionine	0.9 gm	
Cystine	0.4 gm	
Methionine	0.5 gm	
Lysine	0.9 gm	
Tryptophane	0.8 gm	
Vitamin A	134-400 I.U.	400-500 I.U.
Carotene	50-100,150 micrograms	
Vitamin D	15-20 I.U., 30 I.U.	75-150 I.U.
Vitamin E	?	
Vitamin K ....	.04 mg	0.1 to 0.2 mg
Thiamin .....	.1-.2 mg	.2 mg
Riboflavin .....	.3-.4 mg	.3 mg
Nicotinic acid..	1.8 mg	
Pyridoxine ....	.3 mg	.3 mg (14)
Pantothenic acid	.75-1.5 mg	1.5-2.0 mg
Choline	150 mg	?
Biotin .....	.015 mg	.015 mg (19)
Calcium	1 gm	2 gm. 3.5 gm
Phosphorus	0.5-0.8 gm	0.5-0.8 gm
Sodium chloride ..	.5 gm	0.5 gm
Potassium .....	.2 gm	
Magnesium .....	.40 gm	
Manganese .....	.4 mg	.1 mg
Iodine .....	.1 mg	.2 mg

appreciable amounts of thiamin. Twenty per cent of oats will supply the entire requirement. Corn, however, containing only 2 micrograms per gram, would be needed at a level of 75% of the diet.

Even if we take the lower value for riboflavin the requirement is difficult to meet. If we used the best grade dried liver 3% of the diet would be needed. Ten to 12% of skim milk or dried whey is needed if we assume that these products contain 25 micrograms per gram. The best approach is the use of a combination of two or three products which carry fair amounts of riboflavin. A few values for the riboflavin content of such supplements follow:

	Micrograms per gram
Commercial liver meals.....	40-60
Fermentation residues.....	40-100
Dried distillers' solubles.....	25-30
Alfalfa meal	10-20
Brewers' yeast, dry.....	35-40

At present it is impossible to give a definite answer concerning the necessity of considering

the nicotinic acid content of natural rations for chicks, but when purified diets are used it is definitely needed. Whether this need is direct or indirect needs further study.

The pyridoxine requirement of chicks seems to be somewhat higher than that for rats and dogs. However, under normal conditions there is little likelihood for pyridoxine deficiency, since grains, milk products and animal products all carry fair amounts of this vitamin. It is interesting to note, however, that if yeast is used as a source of this vitamin it must be added to the diet at a level of 6%.

In order to insure adequate growth in young chicks, a fairly high level of pantothenic acid is needed. However, this level is readily met by most natural grain rations. It is true that the pantothenic acid content of the egg may be increased considerably by feeding two or three times the amount ordinarily present in natural rations.

The choline requirement for chicks is definitely established, but no conclusion can be made regarding the adult chicken or laying hens. It is true that Abbott and co-workers found that the addition of 75 mg of choline per hen per day increased production of the hens, but Cravens has found good results on a synthetic diet containing very little, if any, choline. The chicken may be much like other animals in that their ability to synthesize choline apparently develops after a certain period in life.

BIOTIN.—Apparently biotin is going to be an important factor to watch in the diet of both chicks and hens, not so much because the original diets may not contain sufficient quantities, but because it is apparently very susceptible to oxidation due to the presence of rancidity. Biotin may therefore be destroyed in certain rations much as vitamin E is destroyed.

Little discussion is necessary regarding the requirements for the mineral elements except to mention that manganese must be carefully watched and perhaps potassium in light of recent work. The iodine requirement of the chick is also higher than some of the other animals, and needs to be given careful consideration.

In conclusion we may say that the figures given in table I will probably be modified to some extent from time to time and new methods of insuring an adequate supply of each

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of these factors will be suggested. But I do feel that we have at the present time a fairly accurate knowledge of the quantitative requirement for those factors that are known. The unknown factors may be of tremendous importance since the failure or success of any diet will depend upon an adequate supply of these new factors. This is especially true in the case of one or two factors which have been found to be present in liver extract and yeast and which are apparently fairly low in grains and milk products. The value of meat scraps and other animal by-products may be dependent largely on their supplying some of these newer factors. It has been recognized for some time that milk and milk products supply additional factors besides protein and riboflavin, but the exact factors supplied are not clearly understood. The recent paper by Sullivan, Bloom, Reeves and Rateike includes a discussion of some of these interrelationships. Apparently milk supplies one of the factors present in yeast, but best results were obtained when a combination of buttermilk and yeast was used.

Getting Most Out of Our Dairy Cows

By J. H. HILTON, at 3d Annual Purdue Nutrition School

Dairymen are willing to do their full share toward winning the war. This means that we will have to do the best we can with what we have. By another year we will have less feed for our herds. Nevertheless, milk production must be maintained at the highest possible level with whatever feeds are available. These feeds must be put together in such amounts and combinations to provide the important dietary essentials necessary for normal health and efficient production. Feeds must be conserved and fed with the highest possible degree of efficiency. In many instances some of old well established rations will have to be modified in accordance with the availability of various ingredients. In many cases modifications can be made in these rations without seriously affecting their nutritive value.

WHEAT CAN REPLACE CORN.—The government has recently made available for feeding purposes 125,000,000 bushels of hard winter wheat. Some of this wheat can very well be used in feeding dairy cattle. Feeding experiments in the Purdue University dairy herd have shown that cracked wheat may replace part or all of the corn in grain mixtures for dairy cows. When wheat is used in place of corn, it should be cracked or rolled and not ground too fine.

SOYBEAN OIL MEAL, a good protein supplement for dairy cattle.—Soybean oil meal will probably be available in large amounts this year. Fortunately this is one of the good protein supplements for dairy cattle. Feeding experiments have shown soybean oil meal to be equal in feeding value to other protein supplements commonly used in rations for milking cows.

GOOD QUALITY ROUGHAGE is always vitally important to dairy farmers. They are the principal source of vitamin A, and good sources of proteins, minerals and energy for his herds. During this coming year dairymen should make every effort to produce a sufficient amount of good quality roughage for his next winter's feed supply. Liberal feeding of good quality roughage will make the available concentrates go farther. This is particularly important since we probably will be scraping the bottom of the grain bins next year.

Grinding grains for lactating cows will not only save feed, but will enable cows to produce more efficiently. Feeding experiments at the Purdue Station have shown that milking cows will produce approximately 40 pounds more milk from 100 pounds of medium ground grain than from the same amount of whole grain.

When whole corn and oats were fed in these tests, from 30-35 per cent of the corn and from 20-25 per cent of the oats passed through the cows undigested.

Some Suggested Grain Mixtures for Milking Cows During the Winter of 1942-43

	With Good Quality Legume Hay lbs.	With Medium Quality Legume or Mixed Hay lbs.	With Timothy or Non-Legume Hay lbs.
Cracked wheat	200	200	100
Ground corn	200	200	100
Ground oats or bran	200	200	200
Soybean oil meal*	100	200	200
Salt	7	8	6
Bone meal	15	16	12

*Soybean oil meal may be replaced by equal weights of linseed oil meal, cottonseed oil meal or a commercial supplement.

SUGGESTED AMOUNTS TO FEED.—Holsteins, Ayrshire and Brown Swiss—Feed 1 lb. of grain mixture to each 3 to 5 lbs. of milk produced. Jerseys and Guernseys—1 lb. of grain mixture for each 2 to 4 lbs. of milk produced. With both hay and silage, feed 1 lb. of hay and 3 lbs. of silage for each 100 lbs. of live weight. With hay and no silage, feed 2 lbs. of hay for each 100 lbs. live weight.

Good Oil Content in Frosted Soybeans

In tests run on 90 samples of soybeans received from approximately 40 Iowa counties, Dr. L. K. Arnold, Research Associate Professor in Chemical Engineering at Iowa State College, failed to establish any correlation between damage count and oil content. Quoting Dr. Arnold:

"With the exception of a sample of McClave beans, which are known to be low oil yielders, none of the samples contained less than 19.0 per cent oil on the dry basis indicating that the early freeze did not appreciably lower the oil content. The appearance of the samples gave no consistent indication of the oil content, poor appearing beans analyzing as high in oil as fine appearing ones. In fact, one of the poorest samples apparently secured by picking out the damaged and immature beans . . . gave the high yield of 23.8 per cent oil on the dry basis."

W. H. Eastman, vice-president of Archer-Daniels-Midland Co., Minneapolis, says the oil yield is better than average. "The color of the oil is naturally green," reports Mr. Eastman, "but otherwise the quality is excellent. So far we have not received a single objection from the trade to this green cast in the oil."

Phosphorus Requirement of Beef Steers

Feeding experiments over a period of three years at the Idaho Agricultural Experiment Station with steer calves of about 400 lbs. initial liveweight showed that definite signs of phosphorus deficiency became apparent with rations containing from 0.11 to 0.15% P, corresponding to a daily intake of 1.04 to 1.63 g. P per 100 lb. liveweight. The Ca:P ratio was from 5.7 to 6.8.

The steers on the low phosphorus rations required about 30% more food per pound of

liveweight increase and their rate of gain was about 37% less than that of corresponding animals on a similar ration but with the P content increased to 0.2% or more. Only after about 8 weeks on the rations did the animals show such signs of P deficiency as low blood P, depraved appetite and lowered food utilization.

Supplementary P, whether supplied as bone-meal or in cottonseed meal, was effective in preventing P deficiency. Fattening steers were found to require 0.18% or more P in their ration.

Supplementing Brood Sow Rations

A. G. Hogan and S. R. Johnson of the Missouri Station improved the basal ration of corn, tankage, linseed meal, and alfalfa meal, which was found in previous investigations to be inadequate for brood sows; and the symptoms were must less severe or entirely eliminated when the ration was supplemented with certain combination of feeding stuffs.

Great improvement followed the addition of combinations including wheat germ, dried skim milk, dried yeast, and a commercial liver preparation. Alfalfa meal and wheat middlings improved the ration but were less effective at the levels tested. Fresh forage or pasture seemed to be completely effective. Even when fresh carrots were available the ration was not improved by their use. In miscellaneous observations no evidence was obtained of even a partial iodine deficiency.

Excessive amounts of cod liver oil produced disastrous results when included with the basal ration, but there was little or no effect from its inclusion with rations that were nearly or partially complete.

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New Ulm Co.'s Improved Feed Mill

The Eagle Roller Mill Co., New Ulm, Minn., one of the oldest milling companies in the Gopher state, successfully applied for priorities assistance from the War Production Board and so achieved a new feed grinding plant, which is doing its part to increase farm production of livestock and livestock products.

The feed plant erected was designed and built by the T. E. Ibberson Co. to utilize as much of the old buildings and machinery as possible. Replacements were held too obsolete, or wornout machines only, and existing buildings were remodeled, where possible, to serve the new plant.

The feed grinding and mixing plant and a new 2-story warehouse were built adjoining the ends of two existing warehouses, and the existing warehouses were remodeled to serve the new feed production plant efficiently.

A four-story cribbed, iron-clad structure houses the feed grinding and mixing machinery. In this building are 19 processing bins. Eight legs serve these bins and the processing machines. The bins hold working supplies of all grains and all bulky feed concentrates and are arranged to feed machines by gravity wherever possible.

The machines include a 9-ton per hour Strong-Scott molasses mixer, a California pellet machine with a special type cooler, a Jacobson hammer mill for grinding, a one-ton Strong-Scott horizontal feed mixer, two Strong-Scott pre-mixers, an Ajax oat huller with scalper, two packers, conveyors, sacking spouts, bag holders, dormant scales and other contributing equipment. All bin valve controls are located on the work floor in direct association with lofting legs to control the flow of materials to bins and to machines. All machines and conveyors are driven by individual motors taking their current from the flour mill powerhouse.

Direct connections between the feed processing plant and each floor of adjoining warehouses minimizes labor in moving materials from warehouse stocks into production, and in moving finished feeds into the service warehouse. A side track serves the receiving warehouse; large loading docks under an enclosed canopy are provided for loading trucks with out-bound feeds.



Feed plant and warehouses of Eagle Roller Mill Co., at New Ulm, Minn.

Cleanliness is promoted by the brightly painted, white finished interior of all working rooms, by the maple floors, by washrooms, lavatories, and locker rooms for the working force, by a full basement that gives ready access to leg boots and their bearings, and by steam heat to maintain comfortable working temperatures.

The feed grinding and mixing plant and its warehouses are a complete unit, separate from the company's flour mill, except for the steam heat, and the generating plant that develops the electric power. It is devoted entirely to production of Eagle Brand feeds and concentrates.

Soybean Oil Meal for Pigs

The Michigan Agricultural Experiment Station compared expeller, raw solvent extracted, and heat solvent extracted soybean meals in feeding trials.

The pigs showed marked preference for the heated meals, that is, the expeller and solvent extracted types over the raw solvent extracted meal. The heated meals also were more efficient and economical to feed pigs than dry rendered tankage, either on pasture or dry lot.

The raw soybean oil meal gave only fair

results when fed to pigs on pasture and was far less valuable than the heated meals. Raw soybean oil meals should be avoided when purchasing for pig feeding.

Dairy Feed Needs Grinding

"The dairy cow is nature's poorest grain grinder," says G. A. Williams, supervisor of Indiana's 63 Dairy Herd Improvement Ass'ns and Purdue's extension dairyman. "Feeding whole grain is both wasteful and costly."

Feeding trials conducted at Purdue University show that 100 pounds of ground grains produced 40 pounds more milk than an equal weight of whole grains. Valuing milk at \$2.50 per hundred pounds, this means a loss of one cent per pound on all grains fed unground to the milking herd.

Dairymen who do not have a supply of old corn on hand may well consider the purchase of wheat which has been made available for feeding to live stock. Coarsely ground wheat, when fed to dairy cattle, may replace one-third to two-thirds of the corn in the regular mixture.

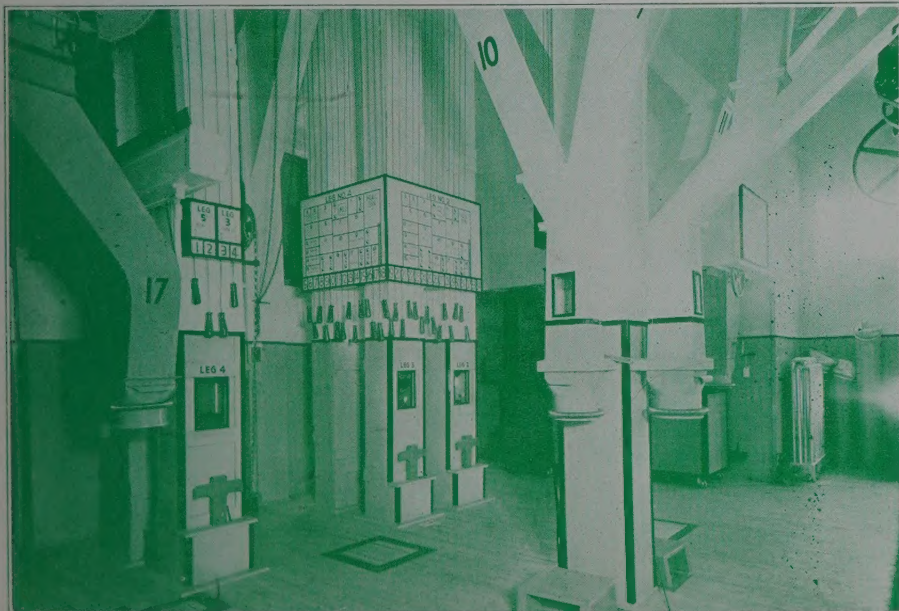
Indiana has a record number of grain-consuming animal units to carry through the winter. This will require the most efficient use of every available bushel. One way to make it go the farthest in the dairy barn is to see that every pound is ground before feeding it.

Fertilizer Rationing

Dr. F. W. Parker of the U. S. Dept. of Agriculture predicts there would probably be enough nitrogen for most essential crop requirements for 1943, and adequate supplies of phosphate and potash.

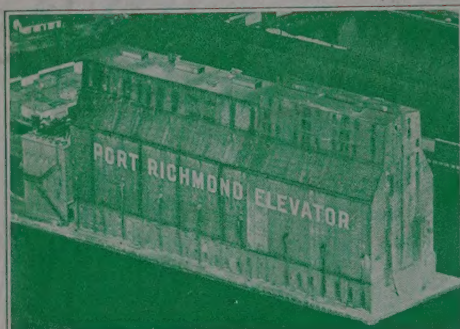
USDA, WPB and OPA have set up the following general principles for distribution: Crops most essential to the war effort should have first call on fertilizer nitrogen supplies. Chemical nitrogen should not be used on non-essential crops, on some essential crops of which there was a very large surplus in storage, or under conditions where it gives a low return. The consumption of phosphoric acid and potash should be increased to utilize most of our productive capacity and to partially offset the lower yield that would result from reduced nitrogen fertilization. With the limitations indicated, nitrogen should be distributed on the basis of past usage.

"It seems desirable from the standpoint of achieving production goals that nitrogen for agricultural uses be rationed to producers and that this can probably best be done thru the same set-up that is now rationing farm machinery. Thru standardization the number of grades of fertilizer sold in the U. S. will be reduced from about 900 to 90. The grades per state will be reduced from an average of 88 to 16."



Workfloor of feed processing plant of Eagle Roller Mill Co., at New Ulm, Minn., is well lighted, with legs, spouts, and bins properly numbered for efficient operation.

Rexall Serves the Reading



Indicative of the efficiency of REXALL Inner-Locked Belting in grain handling plants is the long service it has given the Reading Co. in Philadelphia.

The old Port Richmond Elevator which served the Port of Philadelphia for 50 years installed REXALL Inner-Locked Belting in 1919.



C. W. MACK
General Manager
Port Richmond
Grain Elevator



K. H. ZIEGLER
Superintendent
Port Richmond
Grain Elevator

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CONVEYOR BELTS

378'.....48" x 4 ply	84'.....36" x 4 ply
467'.....48" x 4 ply	416'.....36" x 4 ply
467'.....48" x 4 ply	416'.....36" x 4 ply
209'.....48" x 4 ply	416'.....36" x 4 ply
1568'.....36" x 5 ply	126'.....36" x 4 ply
1752'.....36" x 5 ply	521'.....36" x 4 ply
1728'.....36" x 5 ply	1495'.....36" x 4 ply
1541'.....36" x 5 ply	503'.....36" x 4 ply
1746'.....46" x 5 ply	539'.....36" x 4 ply
138'.....36" x 4 ply	1484'.....36" x 4 ply

LEG BELTS

454'.....46" x 8 ply
454'.....46" x 8 ply
452'.....34" x 7 ply
452'.....34" x 7 ply
452'.....34" x 7 ply
456'.....34" x 7 ply
228'.....34" x 6 ply
53'.....34" x 6 ply

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